

APPENDIX K BIOLOGICAL RESOURCES

This appendix includes the wetlands and biological resources report prepared for this Environmental Impact Statement, as well as a jurisdictional determination from the U.S. Army Corps of Engineers regarding the wetland and streams identified in the Detailed Study Area.



DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

January 7, 2008

Operations and Readiness Division
Regulatory Branch
UN Trib Big Walnut Creek-200300270-1

Elaine Roberts
Columbus Regional Airport Authority
4600 International Gateway
Columbus, Ohio 43219

Dear Ms. Roberts:

I refer to a wetland and stream delineation report prepared on your behalf by ASC Group Inc. received in this office on May 22, 2007 and additional information received on November 19, 2007. The report contains information concerning waters of the United States at the Port Columbus International Airport property in Columbus, Franklin County, Ohio. You have requested that the wetland and stream delineation report be re-verified by this office in order to address requirements associated with the pending Environmental Impact Statement (EIS) for the proposed Runway 10R/28L Relocation Project. The project boundaries associated with the project comprises 750 acres of the 2160 acre site.

Based on our review of the information contained in the report and on past site investigations, it has been determined the wetlands and streams have been correctly delineated. A total of 1.81 acres of jurisdictional wetlands and 8,229' of jurisdictional streams are currently present within the EIS project boundary at the site. It has also been determined that 8.21 acres of isolated wetlands and three isolated ponds totaling 2.98 acres exist within the EIS project boundary. The wetlands and ponds are not hydrologically connected to a surface tributary system or navigable water of the United States. The wetlands and ponds are located in depression areas with no apparent hydrologic connections, either channelized or un-channelized, to a surface tributary system. Before any work is initiated within waters that are not regulated by this office, you should contact the Ohio Environmental Protection Agency, Division of Surface Water at 614-644-2001 to determine state permit requirements.

The Corps of Engineers' authority to regulate jurisdictional waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328. Navigable waters, their tributaries and adjacent wetlands are waters of the United States subject to the provisions of Section 404 of the Clean Water Act. The jurisdictional wetland limits on-site were determined based on the presence of wetland hydrologic condition, hydric soils, hydrophytic plant communities, and connection to surface water tributary system (Big Walnut Creek) as described in your report. The jurisdictional stream limits on-site were determined to be jurisdictional up to the ordinary high water mark. The streams are a tributary to the Scioto River, a navigable water of the United States.

This jurisdictional verification is valid for a period of five years from the date of this letter unless new information warrants revision of the delineation prior to the expiration date. Should you disagree with our jurisdictional determination, you have the right to file an appeal. Enclosed for your use is a form entitled "Notification of Administrative Appeal Options and Process and Request for Appeal."

If you have any questions concerning the above, please contact Kimberly Courts-Brown at 304-399-5210.

Sincerely,



Rebecca A. Rutherford
Chief, North Regulatory Section

Enclosure

Copy Furnished:

Landon McKinney
ASC Group
4620 Indianola Avenue
Columbus, Ohio 43214

Rob Adams
Landrum & Brown Inc.
11279 Cornell Park Drive
Cincinnati, Ohio 45242

Katy Jones
Federal Aviation Administration
11677 South Wayne Road
Suite 107
Romulus, Michigan 48174

Randy Bournique
Ohio Environmental Protection Agency
Division of Surface Water
Post Office Box 1049
Columbus, Ohio 43215

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

Applicant: Columbus Regional Airport Authority	File Number: 200300270-1	Date: 1/7/08
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:
Ginger Mullins, Chief, Regulatory Branch, 304-399-5389
Rebecca Rutherford, Ch, North Regulatory Section 304-399-5210
Mark Taylor, Chief, South Regulatory Section, 304 399-5710

Address: U.S. Army Corps of Engineers
Regulatory Branch
502 8th Street
Huntington, WV 25701

If you only have questions regarding the appeal process you may also contact:

Appeal Review Officer
CELRD-CM-O
550 Main Street, PO BOX 1159
Cincinnati, Ohio 45201-1159
513-684-7261

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:	Telephone number:
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**Wetland Delineation and Threatened and Endangered
Species Survey Report for the
Port Columbus International Airport
Columbus, Franklin County, Ohio**

By

**Landon McKinney, Senior Ecologist
Len Mikles, Senior Ecologist**



**ASC GROUP, INC.
Cultural and Environmental Consultants**

**Wetland Delineation and Threatened and Endangered Species Survey Report for the
Port Columbus International Airport
Columbus, Franklin County, Ohio**

By

**Landon McKinney, Senior Ecologist
Len Mikles, Senior Ecologist**

Submitted By:

**Landon McKinney
Project Manager
ASC Group, Inc.
4620 Indianola Avenue
Columbus, Ohio 43214
614.268.2514**

Submitted To:

**Rob Adams
Landrum & Brown, Inc.
11279 Cornell Park Drive
Cincinnati, Ohio 45242
513.530.1201**

May 15, 2007

EXECUTIVE SUMMARY

ASC Group, Inc., under contract with Landrum & Brown, Inc., conducted a survey for all U.S. Army Corps of Engineers (USACOE) jurisdictional and non-jurisdictional "Waters of the U.S." within a portion of the Port Columbus International Airport, Columbus, Ohio. This survey also included an analysis of all biotic communities as well as a survey for threatened and endangered species. The current project area included a portion of the airport property and areas of possible future expansion. These surveys were conducted on August 1, 2, 8, 9, 23, 28, and November 3, 2006, by either Landon McKinney, Senior Ecologist, Len Mikles, Senior Ecologist, or Richard Paul, Ecologist. The survey for both USACOE jurisdictional and non-jurisdictional waters was conducted in accordance with the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987). A wetland survey was conducted on a substantial portion of the project area and was addressed in a previous report prepared by ASC Group, Inc. (Liptak 2003; Liptak and Queen 2003). The current 2006 wetland delineation included verification of those previously reported wetlands and an examination of additional areas that were not included within the 2003 project area.

A combination of 66 USACOE jurisdictional and non-jurisdictional "Waters of the U.S." occur in the current project area, including 60 wetlands, three ponds, and three streams. All areas were previously reported in 2003 (Liptak and Queen 2003). The only new changes observed include the division of Wetland 16. This area is now divided into two parts, 16A and 16B, from the installation of a culvert. Also, in the 2003 Wetland Delineation report (Liptak and Queen 2003) Wetland 14 was divided into 3 segments. The middle portion of this wetland is now gone. The area has been culverted and paved over for the construction of a parking lot. No new wetlands or other jurisdictional waters were encountered in those areas not surveyed in 2003.

Sixty wetlands, comprising 10.57 acres, were delineated in the project area. Of these, 50 wetlands (8.62 acres) were determined to be Category 1 wetlands. Five wetlands (1.60 acres) were determined to be Category 2 wetlands, and five wetlands (0.35 acres) were determined to be Modified Category 2 wetlands.

Three ponds were identified in the project area. These three open water areas occupy 2.98 acres. A total of three jurisdictional waterways, totaling 8,292 linear feet, were also identified in the project area. The National Flood Insurance Program map of the project area showed that the project area includes areas of 100-year flooding near Big Walnut Creek. However, most of the project area is outside the 100-year floodplain.

The wetlands, ponds, and waterways would be considered jointly by regulatory agencies when reviewing wetland, stream, and water quality impacts. Pursuant to Section 404 of the Clean Water Act, the USACOE has jurisdiction over the placement of fill or dredged material in all jurisdictional "Waters of the United States." Jurisdictional areas include wetlands, rivers, streams, small tributary waterways, lakes, and ponds. A Section 404 permit must be obtained prior to placing any fill material within a jurisdictional area. Non-jurisdictional wetlands are typically isolated wetland areas. Under most circumstances these wetlands are regulated by the Ohio Environmental Protection Agency (OEPA) and require either a General or Individual Isolated Wetland Permit for dredge and fill activities.

The Ohio Department of Natural Resources (ODNR) has no records for any threatened or endangered species in the current project area or within a 1-mile radius (Appendix A: ODNR 2006). The ODNR found no records of existing or proposed state nature preserves, scenic rivers, unique ecological sites, geologic features, breeding or non-breeding animal concentrations, champion trees, or state parks, forests or wildlife areas within 1 mile of the project area (Appendix A: ODNR 2006).

The U.S. Fish and Wildlife Service (USFWS) documented the ranges of the federally endangered clubshell mussel (*Pleurobema clava*), northern riffleshell mussel (*Epioblasma torulosa rangiana*), Scioto madtom (*Noturus trautmani*) and Indiana bat (*Myotis sodalis*) and the rayed bean mussel (*Villosa fabalis*), a federal candidate species, as occurring in Franklin County, Ohio (USFWS 2006a, 2006b). USFWS (2006b) stated that the project as proposed would have no impact on the clubshell mussel, the northern riffleshell mussel, the rayed bean mussel and the Scioto madtom. Suitable roost trees and feeding corridor for the Indiana bat were present in the project area. USFWS (2006b) recommends that suitable roost trees be avoided if possible and that if cutting is unavoidable, further coordination with the USFWS is requested to determine if surveys are warranted.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
TABLE OF CONTENTS.....	iii
LIST OF FIGURES	iv
LIST OF TABLES	iv
INTRODUCTION	1
METHODS	1
Wetlands	1
Streams.....	3
Biotic Communities	4
Threatened and Endangered Species Methods	4
RESULTS	4
Literature Review.....	4
Wetlands	6
Streams.....	16
Open Water Habitats.....	18
Other Biotic Communities	18
Forests	18
Old-Field.....	18
Wasteground	19
Wildlife.....	25
ENDANGERED SPECIES.....	27
SUMMARY.....	29
LITERATURE CITED	31
FIGURES.....	33
APPENDIX A: AGENCY CORRESPONDENCE	A - 1
APPENDIX B: PHOTOGRAPHS.....	B - 1
APPENDIX C: WETLAND DETERMINATION FORMS.....	C - 1
APPENDIX D: ORAM V.5.0 FORMS	D - 1
APPENDIX E: HHEI AND QHEI DATA FORMS.....	E - 1

LIST OF FIGURES

Figure 1. ODOT map showing project vicinity for the Port Columbus International Airport, Columbus, Franklin County, Ohio..... 34

Figure 2. Portions of the 1982 photorevised New Albany, 1982 photorevised Northeast Columbus, 1994 Reynoldsburg, and 1994 photorevised Southeast Columbus quadrangles (USGS 7.5' topographic maps) showing the Port Columbus International Airport project area..... 35

Figure 3. Soil Survey map (USDA, SCS 1980), showing the Port Columbus International Airport project area..... 36

Figure 4. National Wetland Inventory maps (USFWS 1995a, 1995b, 1995c, 1995d) showing the Port Columbus International Airport project area..... 37

Figure 5. Overview map of the project area, showing wetlands, other possible "Waters of the U.S.," and areas of the 100-year floodplain..... 38

Figure 6. Map of the Port Columbus International Airport project area, showing wetlands, streams, ponds, areas of 100-year floodplain, potential Indiana bat roost trees, photograph locations, and directions. (5 Sheets) 39

LIST OF TABLES

Table 1. Soil and Land-Use Types Present Within the Project Area (USDA, NRCS 1980)... 5

Table 2. Wetlands Summary Table for the Port Columbus International Airport Project Area..... 7

Table 3. Summary of Wetlands 11A through 11Z..... 13

Table 4. Summary of Wetlands 15A through 15E..... 15

Table 5. Summary of Wetlands 17A through 17L..... 16

Table 6. Waterway Summary for the Port Columbus International Airport Project Area..... 17

Table 7. Vegetation Summary Table for the Port Columbus International Airport Project Area..... 19

Table 8. Bird Summary Table for the Port Columbus International Airport Project Area.... 25

Table 9. Mammals and Amphibians Summary Table for the Port Columbus International Airport Project Area..... 26

Table 10. Federally Endangered and Candidate Species Whose Ranges Include Franklin County (USFWS 2006)..... 28

INTRODUCTION

ASC Group, Inc., under contract with Landrum & Brown, Inc., conducted a survey for all jurisdictional and non-jurisdictional "Waters of the U.S." within a portion of the Port Columbus International Airport, Columbus, Ohio. This survey also included an analysis of all biotic communities as well as a survey for threatened and endangered species. The current project area included the airport property and areas for possible future expansion, and encompassed approximately 750 acres (Figures 1 and 2). These surveys were conducted on August 1, 2, 8, 9, 23, 28, and November 3, 2006, by either Landon McKinney, Senior Ecologist, Len Mikles, Senior Ecologist, or Richard Paul, Ecologist.

METHODS

WETLANDS

The current survey was conducted in accordance with the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987). A previous wetland survey was conducted on a substantial portion of the project area in 2003 and a wetland delineation report was prepared by ASC Group, Inc. (Liptak 2003; Liptak and Queen 2003). The current survey included verification of those wetlands, which still occur in the current project area, and an examination of new areas that were not included within the 2003 boundaries.

The *Soil Survey of Franklin County, Ohio* (USDA, SCS 1980) was reviewed to determine which soils were present in the current project area. Cross-references to the Hydric Soils List for Franklin County (USDA, NRCS 1998) and the Supplemental Hydric Soils List for Franklin County (USDA, NRCS 2004) were utilized to determine if soils within the current project area qualified as hydric soils or non-hydric soils known to contain hydric inclusions, respectively.

The National Wetland Inventory (NWI) maps (USFWS 1995a, 1995b, 1995c, 1995d) were used to identify potential wetlands in the current project area. The *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) was used to determine whether wetlands were present within the project area. Wetlands were identified according to the routine determination method outlined in Section D of the manual (Environmental Laboratory 1987). Using this method, the three criteria—vegetation, soil, and hydrological features—were examined and evaluated to determine the presence of wetlands. Determination of a wetland includes:

1. Examination of the vegetation for the presence of obligate, facultative-wet, or facultative wetland species based on the *Floristic Quality Assessment Index (FQAI) for Vascular Plants and Mosses for the State of Ohio* (Andreas et al. 2004).
2. Examination of the soils for hydric conditions such as gleying, low matrix chromas, iron concretions, mottling, or sulfidic material.
3. Examination of hydrological conditions for the presence of inundation, soil saturation, drainage patterns, sediment deposits, or other hydrologic indicators characteristic to wetlands.

If a wetland determination indicated that an area was not a wetland, the location was noted and no further action was taken. If the wetland determination indicated that an area was a wetland, a delineation was conducted to identify the boundary between wetland and non-wetland areas. Wetland data forms summarizing the field observations can be found in Appendix C of this report. A Trimble Pro XRS global positioning system (GPS) was used to determine the location of the marked boundaries with an accuracy of 1 meter. A map of the project area, including all USACOE jurisdictional and non-jurisdictional "Waters of the U.S." was generated from the GPS data.

The Ohio Rapid Assessment Method for Wetlands (ORAM) version 5.0 was used to assess the functional quality of each wetland (OEPA 2001). The wetland was assigned a category according to the most recent ORAM score calibration (Mack 2000). The ORAM categorizes wetlands according to their functional quality into three categories. Category 1 wetlands "...support minimal wildlife habitat, and minimal hydrological and recreational functions" (Ohio Administrative Code Rule 3745-1-54(C)(1)). They are usually isolated hydrologically with limited function, low species diversity, and a dominance of invasive non-native species.

Category 2 wetlands "...support moderate wildlife habitat, or hydrological or recreational functions" and are "dominated by native species but generally without the presence of, or habitat for, rare, threatened or endangered species; and wetlands which are degraded but have a reasonable potential for reestablishing lost wetland functions" (Ohio Administrative Code Rule 3745-1-54(C)(2)). Modified Category 2 wetlands have been altered to diminished a wetland function.

Category 3 wetlands have "...superior habitat, or superior hydrological or recreational functions" (Ohio Administrative Code Rule 3745-1-54(C)(3)). High functionality, high diversity, and a high proportion of native species generally characterize them.

ORAM data forms for each wetland can be found in Appendix D of this report. Wetlands with identical functional characteristics in proximity to one another were grouped together for the purposes of the ORAM score. This approach was generally used in wetlands that were part of a wetland/upland mosaic. In other instances, an ORAM score for one representative wetland was assigned to similar wetlands in the project area. This approach was generally used for ditches that were functionally similar, though not necessarily in proximity with one another.

Representative photographs were taken in the field to document the types of wetlands present in the project area. Photographs typically were taken at the wetland-upland boundary.

STREAMS

A jurisdictional waters determination was conducted for streams or tributaries that possessed a defined channel and streambed, as defined by the ordinary high water mark. These streams were evaluated to determine whether the waterway qualified as a Primary Headwater Habitat (PHWH) stream, as defined by the OEPA (2002). PHWH streams have a defined bed and bank, with either continuous or periodic flowing water, a watershed area of less than 1 mi², and maximum pool depth (excluding plunge pools) of 16 in or less. Streams that met this definition were evaluated using the Headwater Habitat Evaluation Index (HHEI) [OEPA 2002]. This evaluation is based on three physical measurements that have been found to correlate well with biological measures of stream quality. Streams are assigned to a Class (I, II, or III) based on the score that is derived from the HHEI.

Class I streams typically are ephemeral with little or no aquatic life present. Class II streams are typically found to have a moderately diverse community of warm-water adapted native fauna either present seasonally or on an annual basis. Class III streams have native fauna adapted to cool-cold perennial flowing water characterized by a community of vertebrate and /or a diverse community of benthic macroinvertebrates. HHEI data forms for the streams identified in the project area are located in Appendix E.

For non-headwater streams with a watershed area of greater than 1 mi², the Qualitative Habitat Evaluation Index (QHEI), as described by the Ohio EPA (OEPA 1989), was used to evaluate habitat quality. The QHEI is based on a quality rating of the stream substrate, in-stream

cover, channel morphology, riparian zone, stream bank erosion, pool/glide and riffle/run quality. QHEI scores can range from 0 to 100, and are grouped into five narrative ranges: very poor (0–30), poor (31–45), fair (46–59), good (60–74), and excellent (≥ 75). Illustrations prepared by the field ecologist to depict the natural state of the stream are provided along with the QHEI information (Appendix E). Photographs of representative segments of jurisdictional waterways are presented in Appendix B.

BIOTIC COMMUNITIES

All biotic communities were surveyed within the current project area. All plant species encountered were identified, recorded and dominant species were noted. Plants were identified according to Gleason and Cronquist (1991). The biotic communities were identified and described based on the type of community and the dominant plant species in each. Terrestrial vertebrates were recorded during the survey based on actual observance, calls, tracks, scat, nests, burrows, and road kill.

THREATENED AND ENDANGERED SPECIES METHODS

The ODNR (Appendix A) and the USFWS (2006a, 2006b) were consulted on the presence of any federally or state-listed species known to occur within the current project area or within a 1-mile radius. The Natural Heritage Database search included a 5-mile radius for the Indiana bat. The current project area was surveyed on foot for the presence of suitable Indiana bat summer roost trees and feeding corridors. Additionally, the project area was surveyed for the presence of any state-listed species known to occur in Franklin County.

Representative photographs (1–23) documenting various ecological resources, including streams and wetlands, are contained in Appendix B.

RESULTS

LITERATURE REVIEW

The *Soil Survey of Franklin County* (USDA, SCS 1980) showed nine soil map units within the project area (Figure 3; Table 1). Of these soil types, Pewamo-Urban land complex (Pn) is listed as a hydric soil (USDA, NRCS 1998). Hydric soils indicate the potential for the presence of wetlands. The Pewamo-Urban land complex (Pn) occurred in the western third of the project area. In addition, all the soils in the project area (except the Genesee silt loam, occasionally flooded and Eldean silt loam, 2–6 percent slopes) are known to contain hydric

inclusions according to the supplemental list of non-hydric soil map units with hydric inclusions for Franklin County, Ohio (USDA, NRCS 2004).

Table 1. Soil and Land-Use Types Present Within the Project Area (USDA, NRCS 1980).

Soil/Land Use	Abbreviation	Soil Type	Known to Contain Hydric Inclusions
Bennington-Urban land complex, 0-2 percent slopes	BfA	Nonhydric	Yes
Bennington-Urban land complex, 2-6 percent slopes	BfB	Nonhydric	Yes
Cardington silt loam, 2-6 percent slopes	CaC2	Nonhydric	Yes
Cardington-Urban land complex, -12 percent slopes	CbC	Nonhydric	Yes
Eldean silt loam, 2-6 percent slopes, eroded	ElC2	Nonhydric	No
Eldean-Urban land complex, 2-6 percent slopes	EmB	Nonhydric	Yes
Genesee silt loam, occasionally flooded	Gn	Nonhydric	No
Pewamo-Urban land complex	Pn	Hydric	N/A
Urban land-Bennington complex, 2-6 percent slopes	Uu	Nonhydric	Yes

The NWI maps (USFWS 1995a, 1995b, 1995c, 1995d) showed 19 wetlands within the project area (Figure 4). According to Cowardin et al. (1979), 12 of these wetlands were classified as emergent marshes, four as excavated wetlands with unconsolidated bottom sediments (usually ponds), two as forested wetlands, and one as a scrub-shrub wetland.

The ODNR found no records of threatened or endangered species within a 1-mile radius of the current project area (Appendix A: ODNR 2006). Additionally, they found no existing or proposed state nature preserves, scenic rivers, unique ecological sites, geologic features, breeding or nonbreeding animal concentrations, champion trees, or state parks, forests, or wildlife areas within 1 mile of the current project area (Appendix A: ODNR 2006).

The ranges of the federally endangered Indiana bat (*Myotis sodalis*), clubshell mussel (*Pleurobema clava*), northern riffleshell mussel (*Epioblasma torulosa rangiana*), and Scioto madtom (*Noturus trautmani*); and the federal candidate species rayed bean mussel (*Villosa fabalis*), include Franklin County (USFWS 2006a, 2006b). However, the ODNR found no records of any of these four federally listed species within a 1-mile radius of the current project area (Appendix A: ODNR 2006). The nearest Indiana bat record is approximately 44 miles southeast in Falls Gore Township, Hocking County (Appendix A: ODNR 2006).

The project area is located in the Big Walnut Creek watershed (HUC: 05060001-140) [USDA, NRCS 1999]. Big Walnut Creek is part of the larger Scioto River drainage basin and has the Aquatic Life Use Designation of Warmwater Habitat (WWH) according to the Ohio Administrative Code section 3745-1-09. The National Flood Insurance Program map of the project area showed that the project area includes areas of 100-year flooding near Big Walnut Creek (Figure 5; FEMA 1995). However, most of the project area is outside the 100-year floodplain.

WETLANDS

All previously delineated USACOE jurisdictional and non-jurisdictional waters were verified and any changes were noted. The only new changes that were observed include the division of Wetland 16. This area was reported as one wetland in 2003 (Liptak and Queen 2003). The area is now divided into two parts, 16A and 16B, from the installation of a culvert. Also, in the 2003 Wetland Delineation report (Liptak and Queen 2003) Wetland 14 was divided into 3 segments. The middle portion of this wetland is now gone. The area has been culverted and paved over for the construction of a parking lot. No new wetlands or other jurisdictional waters were encountered within or outside of the 2003 project area boundaries. Some wetlands or other jurisdictional waters delineated in 2003 are now located outside of the current project boundaries. The primary wetland types were emergent and forested wetlands. Emergent wetlands typically occurred along stream and ditch margins or in isolated depressions. Forested wetlands typically occurred as isolated depressions within upland forest areas.

A total of 60 wetlands, encompassing 10.57 acres, were delineated in the project area. Each wetland area is summarized in Table 2. A total of 50 wetlands (8.62 acres) were determined to be Category 1 wetlands. Five wetlands (1.60 acres) were determined to be Category 2 wetlands, and five wetlands (0.35 acres) were determined to be Modified Category 2 wetlands. The delineated boundaries of these areas are presented on Figure 6, Sheets 1-5. Photographs of representative wetland areas are provided in Appendix B. Wetland determination forms for wetland and upland areas are contained in Appendix C and ORAM forms are included in Appendix D.

Wetland 1

Wetland 1 (Figure 5; Figure 6, Sheet 4; Table 2; Appendix B: Photograph 1) is a forested area located in an upland forest area west of Stelzer Road. It appeared to be hydrologically isolated, and is classified as a palustrine, forested, broad-leaved deciduous wetland with a seasonal hydrologic regime (PFO1C) [Cowardin et al. 1979].

Table 2. Wetlands Summary Table for the Port Columbus International Airport Project Area.

Wetland/ Area No.	Description	Location	Classification (Cowardin et al. 1979)	Major Plant Species		Hydrologic Status	ORAM v. 5.0 Score	ORAM Category	Area Within Project Area (acres)
				Scientific Name	Common Name				
1	Forested wetland	Second-growth forest south of 17 th Ave, west of Stelzer Road	PFOIC	<i>Acer saccharinum</i> <i>Ulmus americana</i> <i>Populus deltoides</i> <i>Toxicodendron radicans</i>	Silver maple American elm Cottonwood Poison ivy	Isolated	45	2	0.11
2	Forested wetland	Second-growth forest south of 17 th Ave, west of Stelzer Road	PFOIC	<i>Acer saccharinum</i> <i>Fraxinus pennsylvanica</i>	Silver maple Green ash	Isolated	48	2	0.84
3	Forested wetland	Second-growth forest south of 17 th Ave, west of Stelzer Road	PFOIC	<i>Acer saccharinum</i> <i>Quercus palustris</i> <i>Acer negundo</i> <i>Glyceria striata</i>	Silver maple Pin oak Box elder Fowl mannagrass	Isolated	39	Modified 2	0.06
4	Forested wetland	Second-growth forest south of 17 th Ave, west of Stelzer Road	PFOIC	<i>Acer saccharinum</i> <i>Fraxinus pennsylvanica</i> <i>Viburnum dentatum</i>	Silver maple Green ash Arrowwood	Isolated	38.5	Modified 2	0.07
5	Forested wetland	Second-growth forest south of 17 th Ave, west of Stelzer Road	PFOIC	<i>Acer saccharinum</i> <i>Fraxinus pennsylvanica</i> <i>Viburnum dentatum</i>	Silver maple Green ash Arrowwood	Isolated	38.5	Modified 2	0.05
6	Forested wetland	Second-growth forest south of 17 th Ave, west of Stelzer Road	PFOIC	<i>Acer saccharinum</i> <i>Viburnum dentatum</i> <i>Scirpus cyperinus</i> <i>Glyceria striata</i>	Silver maple Arrowwood Woolgrass Fowl mannagrass	Isolated	41	Modified 2	0.03
7	Forested wetland	Second-growth forest south of 17 th Ave, west of Stelzer Road	PFOIC	<i>Acer saccharinum</i> <i>Viburnum dentatum</i> <i>Scirpus cyperinus</i> <i>Glyceria striata</i>	Silver maple Arrowwood Woolgrass Fowl mannagrass	Isolated	42	Modified 2	0.14
8	Forested wetland	Second-growth forest south of 17 th Ave, west of Stelzer Road	PFOIC	<i>Quercus palustris</i> <i>Ulmus americana</i>	Pin oak American elm	Isolated	49	2	0.39
9	Forested wetland	Second-growth forest south of 17 th Ave, west of Stelzer Road	PFOIC	<i>Quercus palustris</i> <i>Ulmus americana</i>	Pin oak American elm	Isolated	47	2	0.05
10	Forested wetland	Second-growth forest south of 17 th Ave, west of Stelzer Road	PFOIC	<i>Acer saccharinum</i> <i>Quercus palustris</i> <i>Rhamnus frangula</i> <i>Viburnum dentatum</i>	Silver maple Pin oak European buckthorn Arrowwood	Isolated	48	2	0.21
11A-11Z	Emergent wetlands in old field	South of 17 th Avenue, west of Stelzer Road	PEM1E	<i>Fraxinus pennsylvanica</i> <i>Juncus effusus</i> <i>Lysimachia nummularia</i>	Green ash (seedlings) Soft rush Moneywort	Isolated	27.5	1	6.19

Table 2. Wetlands Summary Table for the Port Columbus International Airport Project Area.

Wetland/ Area No.	Description	Location	Classification (Cowardin et al. 1979)	Major Plant Species		Hydrologic Status	ORAM v. 5.0 Score	ORAM Category	Area Within Project Area (acres)
				Scientific Name	Common Name				
12A-12D	Emergent wetlands	Mowed field north of 17 th Avenue, west of Stelzer Road	PEM1E	<i>Juncus effusus</i> <i>Scirpus cyperinus</i>	Soft rush Woolgrass	Isolated	15.5	1	0.079
13	Ditch	Sparsely vegetated ditch north of 17 th Avenue, west of Stelzer Road	PEMC	<i>Juncus effusus</i> <i>Scirpus cyperinus</i>	Soft rush Woolgrass	Isolated	18.5	1	0.21
14A	Ditch	North of International Gateway, east of Stelzer Road	PEMC	<i>Typha angustifolia</i> <i>Echinochloa crus-galli</i> <i>Scirpus cyperinus</i>	Narrow-leaved cattail Barnyard grass Woolgrass	Connected	19.5	1	0.28
14B	Ditch	South of International Gateway, south of Runway 10R-28L	PEMC	<i>Typha angustifolia</i> <i>Echinochloa crus-galli</i> <i>Scirpus cyperinus</i>	Narrow-leaved cattail Barnyard grass Woolgrass	Connected	19.5	1	0.14
15A-15E	Ditches south of runway, draining into Big Walnut Creek	South of Runway 10L-28R	PEMC	<i>Typha angustifolia</i>	Narrow-leaved cattail	Connected	18.5	1	1.05
16A-16B	Ditch	South of International Gateway	PEMC	<i>Typha angustifolia</i>	Cattail	Connected	17.5	1	0.059
17A-17I	Ditch	North of Runway 10R-28L	PEMC	<i>Typha angustifolia</i> <i>Bidens cernua</i>	Narrow-leaved cattail Nodding beggar tick	Connected	20	1	0.60
18	Ditch	South of 5 th Avenue	PEMC	<i>Typha angustifolia</i>	Narrow-leaved cattail	Connected	10	1	0.01
Total									10.57

It is dominated by hydrophytic vegetation, including American elm (*Ulmus americana*), cottonwood (*Populus deltoides*), poison ivy (*Toxicodendron radicans*), and silver maple (*Acer saccharinum*). The soil showed signs of reducing conditions. The wetland's location in the landscape provided evidence of wetland hydrology. Other signs of wetland hydrology included drainage patterns.

Wetland 1 was determined to be 0.11 acres. It scored 45 on the ORAM, classifying it as a Category 2 wetland (Mack 2000).

Wetland 2

Wetland 2 (Figure 5; Figure 6, Sheet 4; Table 2; Appendix B: Photograph 2) is a forested wetland located west of Stelzer Road. It appeared to be hydrologically isolated, and is classified as a palustrine, forested, broad-leaved deciduous wetland with a seasonal hydrologic regime (PFO1C) [Cowardin et al. 1979]. It is dominated by hydrophytic vegetation, including silver maple (*Acer saccharinum*) and green ash (*Fraxinus pennsylvanica*). The soil showed signs of reducing conditions. The area's location in a small depression provided evidence of wetland hydrology. Other signs of wetland hydrology included drainage patterns.

Wetland 2 comprised 0.84 acres. It scored 48 on the ORAM, classifying it as a Category 2 wetland (Mack 2000).

Wetland 3

Wetland 3 (Figure 5; and Figure 6, Sheet 4; Table 2; Appendix B: Photograph 3) is a forested wetland located west of Stelzer Road. It appeared to be hydrologically isolated, and is classified as a palustrine, forested, broad-leaved deciduous wetland with a seasonal hydrologic regime (PFO1C) [Cowardin et al. 1979]. It is dominated by hydrophytic vegetation including silver maple (*Acer saccharinum*), pin oak (*Quercus palustris*), box elder (*Acer negundo*), and fowl mannagrass (*Glyceria striata*). The soil showed signs of reducing conditions. The wetland's location in a depression provided evidence of wetland hydrology. Other signs of wetland hydrology included a combination of secondary indicators.

Wetland 3 encompassed 0.06 acres. It scored 39 on the ORAM, classifying it as a Modified Category 2 wetland (Mack 2000).

Wetland 4

Wetland 4 (Figure 5; Figure 6, Sheet 4; Table 2; Appendix B: Photograph 4) is a forested wetland located west of Stelzer Road. Although adjacent to Wetland 5, it appeared to be hydrologically isolated from any "Waters of the U.S." such as streams. Wetland 4 is classified

as a palustrine, forested, broad-leaved deciduous wetland with a seasonal hydrologic regime (PFO1C) [Cowardin et al. 1979]. It is dominated by hydrophytic vegetation including silver maple (*Acer saccharinum*), arrowwood (*Viburnum dentatum*), and green ash (*Fraxinus pennsylvanica*). The soil showed signs of reducing conditions. The wetland's location in a slight depression provided evidence of wetland hydrology. Drainage patterns provided further evidence of wetland hydrology.

Wetland 4 comprised 0.07 acres. Wetlands 4 scored 38.5 on the ORAM, classifying it as Modified Category 2 wetland (Mack 2000).

Wetland 5

Wetland 5 (Figure 5; Figure 6, Sheet 4; Table 2; Appendix B: Photograph 5) is a forested wetland located west of Stelzer Road. Although adjacent to Wetland 4, it appeared to be hydrologically isolated from any "Waters of the U.S." such as streams. Wetland 5 is classified as a palustrine, forested, broad-leaved deciduous wetland with a seasonal hydrologic regime (PFO1C) [Cowardin et al. 1979]. It was dominated by hydrophytic vegetation including silver maple (*Acer saccharinum*), arrowwood (*Viburnum dentatum*), and green ash (*Fraxinus pennsylvanica*). The soil showed signs of reducing conditions. The wetland's location in a slight depression provided evidence of wetland hydrology. Drainage patterns provided further evidence of wetland hydrology.

Wetland 5 was determined to be 0.05 acres. Wetland 5 scored 38.5 on the ORAM, classifying it as a Modified Category 2 wetland (Mack 2000).

Wetland 6

Wetland 6 (Figure 5; Figure 6, Sheet 4; Table 2; Appendix B: Photograph 6) is a forested wetland located west of Stelzer Road. Although adjacent to Wetland 7, it appeared to be hydrologically isolated from "Waters of the U.S." such as streams. Wetland 6 is classified as a palustrine, forested, broad-leaved deciduous wetland with a seasonal hydrologic regime (PFO1C) [Cowardin et al. 1979]. It is dominated by hydrophytic vegetation including silver maple (*Acer saccharinum*), woolgrass (*Scirpus cyperinus*), fowl mannagrass (*Glyceria striata*), and arrowwood (*Viburnum dentatum*). The soil showed signs of reducing conditions. The wetland's location in a slight depression provided evidence of wetland hydrology. The presence of drainage patterns provided further evidence of wetland hydrology.

Wetland 6 encompassed 0.03 acres. It scored 41 on the ORAM, classifying it as a Modified Category 2 wetland (Mack 2000).

Wetland 7

Wetland 7 (Figure 5; Figure 6, Sheet 4; Table 2; Appendix B: Photograph 7) is a forested wetland located west of Stelzer Road. Although adjacent to Wetland 6, it appeared to be hydrologically isolated from "Waters of the U.S." such as streams. Wetland 7 is classified as a palustrine, forested, broad-leaved deciduous wetland with a seasonal hydrologic regime (PFO1C) [Cowardin et al. 1979]. It is dominated by hydrophytic vegetation including silver maple (*Acer saccharinum*), woolgrass (*Scirpus cyperinus*), fowl mannagrass (*Glyceria striata*), and arrow wood (*Viburnum dentatum*). The soil showed signs of reducing conditions. The wetland's location in a slight depression provided evidence of wetland hydrology. The presence of drainage patterns provided further evidence of wetland hydrology.

Wetland 7 was determined to be 0.14 acres. It scored 42 on the ORAM, classifying it as a modified Category 2 wetland (Mack 2000).

Wetland 8

Wetland 8 (Figure 5; Figure 6, Sheet 4; Table 2; Appendix B: Photograph 8) is a forested wetland located west of Stelzer Road. Although adjacent to Wetland 9, it appeared to be hydrologically isolated from "Waters of the U.S." such as streams. Wetland 8 is classified as a palustrine, forested, broad-leaved deciduous wetland with a seasonal hydrologic regime (PFO1C) [Cowardin et al. 1979]. Dominated by pin oak (*Quercus palustris*) and American elm (*Ulmus americana*). The soil showed signs of reducing conditions. The wetland's location in a depressional area provided evidence of wetland hydrology. Other signs of wetland hydrology included a combination of secondary indicators.

Wetland 8 was determined to be 0.39 acres. It scored 49 on the ORAM, classifying it as a Category 2 wetland (Mack 2000).

Wetland 9

Wetland 9 (Figure 5; Figure 6, Sheet 4; Table 2; Appendix B: Photograph 9) is a forested wetland located west of Stelzer Road. It appeared to be hydrologically isolated, and is classified as a palustrine, forested, broad-leaved deciduous wetland with a seasonal hydrologic regime (PFO1C) [Cowardin et al. 1979]. The dominant plant species were pin oak (*Quercus palustris*) and American elm (*Ulmus americana*). The soil showed signs of reducing conditions. The wetland's location in a depressional area provided evidence of wetland hydrology. Other signs of wetland hydrology included a combination of secondary indicators.

Wetland 9 was determined to be 0.05 acres. It scored 47 on the ORAM, classifying it as a Category 2 wetland (Mack 2000).

Wetland 10

Wetland 10 (Figure 5; Figure 6, Sheet 4; Table 2; Appendix B: Photograph 10) is a forested wetland located west of Stelzer Road. It appeared to be hydrologically isolated, and is classified as a palustrine, forested, broad-leaved deciduous wetland with a seasonal hydrologic regime (PFO1C) [Cowardin et al. 1979]. It is dominated by hydrophytic vegetation including pin oak (*Quercus palustris*), silver maple (*Acer saccharinum*), European buckthorn (*Rhamnus frangula*), and arrowwood (*Viburnum dentatum*). The soil showed signs of reducing conditions. The wetland's location in a depressional area provided evidence of wetland hydrology. Other signs of wetland hydrology included a combination of secondary indicators.

Wetland 10 was determined to be 0.21 acres. The ORAM score for Wetland 10 was 48, classifying it as a Category 2 wetland (Mack 2000).

Wetlands 11A–11Z

A mosaic of 26 isolated herbaceous wetlands (Figure 5; Figure 6, Sheet 4; Tables 2 and 3; Appendix B: Photographs 11–15) occurs in a partially mowed old-field area north of Wetlands 1–10. These wetlands are located in shallow depressions in the old-field area, and are generally dominated by soft rush (*Juncus effusus*), moneywort (*Lysimachia nummularia*), and green ash (*Fraxinus pennsylvanica*) seedlings. They appeared to be hydrologically isolated from "Waters of the U.S." such as streams. Wetlands 11A through 11Z are classified as palustrine persistent emergent wetlands with a seasonally hydrologic regime (PEM1E) [Cowardin et al. 1979]. The soil showed signs of reducing conditions throughout the old-field area. Signs of wetland hydrology included a combination of secondary indicators. These wetlands were grouped for purposes of the ORAM calculations. As a whole, Wetlands 11A through 11Z occupied 6.19 acres. The acreage for each individual Wetland is summarized in Table 3 below. All together, these wetlands scored 27.5 on the ORAM, classifying them as Category 1 wetlands (Mack 2000).

Table 3. Summary of Wetlands 11A through 11Z.

Wetland	Acreage	Wetland	Acreage	Wetland	Acreage	Wetland	Acreage
11A	0.019	11H	3.06	11O	0.003	11V	0.008
11B	0.08	11I	0.33	11P	0.01	11W	0.02
11C	0.23	11J	0.10	11Q	0.003	11X	0.05
11D	0.479	11K	0.05	11R	0.009	11Y	0.007
11E	0.01	11L	0.002	11S	0.01	11Z	0.02
11F	1.19	11M	0.46	11T	0.003		
11G	0.02	11N	0.01	11U	0.004		
Sub Total	2.028	Sub Total	4.012	Sub Total	0.042	Sub Total	0.105
Grand Total (Acreage)							6.19

Wetlands 12A–12D

Wetlands 12A–12D (Figure 5; Figure 6, Sheet 4; Table 2; Appendix B: Photographs 16 and 17) are located in a cleared old-field area west of Stelzer Road. They appeared to be hydrologically isolated from “Waters of the U.S.” such as streams, and are classified as palustrine persistent emergent wetlands with a seasonally saturated hydrologic regime (PEM1E) [Cowardin et al. 1979]. They were dominated by woolgrass (*Scirpus cyperinus*) and soft rush (*Juncus effusus*). The soil showed signs of reducing conditions. Their location in a depression provided evidence of wetland hydrology. Other signs of wetland hydrology included a combination of secondary indicators. As a whole, wetlands 12A through 12D occupied 0.079 acres. Wetlands 12A–12D were grouped for purposes of the ORAM calculations, as they were functionally identical. As a group, they scored 15.5 on the ORAM, classifying them as Category 1 wetlands (Mack 2000). Wetland 12A was determined to be 0.006 acres, and Wetland 12B comprised 0.003 acres, Wetland 12C included 0.06 acres, and Wetland 12D was determined to be 0.01 acres in size.

Wetland 13

Wetland 13 is a sparsely vegetated ditch west of Stelzer Road (Figure 5; Figure 6, Sheet 4; Table 2). It appeared to drain into a storm sewer whose discharge point was unknown. It contained areas of hydrophytic vegetation including woolgrass (*Scirpus cyperinus*) and soft rush (*Juncus effusus*). Wetland 13 is classified as palustrine emergent wetland with a seasonally flooded hydrologic regime (PEMC) [Cowardin et al. 1979].

Wetland 13 was determined to be 0.21 acres. The ORAM score for Wetland 13 was 18.5, classifying it as a Category 1 wetland (Mack 2000).

Wetlands 14A and 14B

Wetlands 14A and 14B (Figure 5; Figure 6, Sheets 1 and 4; Table 2; Appendix B: Photograph 18) are a series of ditches beginning at Stelzer Road north of International Gateway and continuing southeast across International Gateway and Runway 10R-28L. In 2003, this wetland had three disjunct segments. However, the original middle segment has been piped and paved over for a parking lot. Wetlands 14A and 14B are classified as palustrine emergent wetlands with a seasonally flooded hydrologic regime (PEMC) [Cowardin et al. 1979]. The dominant vegetation in these ditches was narrow-leaved cattail (*Typha angustifolia*), woolgrass (*Scirpus cyperinus*), and barnyard grass (*Echinochloa crus-galli*). The soil showed signs of reducing conditions. The wetland's location in the bottom of a ditch provided evidence of wetland hydrology.

Wetland 14A was determined to be 0.28 acres. Wetland 14B was determined to be 0.14 acres. Collectively, both Wetlands scored 19.5 on the ORAM, classifying them as Category 1 wetlands (Mack 2000).

Wetlands 15A–15E

Wetlands 15A–15E (Figure 5; Figure 6, Sheets 1 and 2; Tables 2 and 4; Appendix B: Photograph 19) are a series of ditches located north of International Gateway and south of Runway 10L-28R. They drain into Big Walnut Creek, are classified as palustrine, emergent wetlands with a seasonal hydrologic regime (PEMC) [Cowardin et al. 1979]. The ditches were dominated by hydrophytic vegetation including narrow-leaved cattail (*Typha angustifolia*). The soil showed signs of reducing conditions. The wetlands' location in ditches provided evidence of wetland hydrology.

As a whole Wetlands 15A–15E occupied 1.05 acres. The acreage for each individual Wetland is summarized in Table 4 below. Collectively, the ORAM scores for Wetland 15A–15E were 18.5, classifying them as Category 1 wetlands (Mack 2000).

Table 4. Summary of Wetlands 15A through 15E.

Wetland	Acreage
15A	0.17
15B	0.38
15C	0.19
15D	0.14
15E	0.17
Total	1.05

Wetland 16A–16B

Wetland 16A and 16B (Figure 5; Figure 6, Sheet 1; Table 2; Appendix B: Photograph 20) are emergent wetlands located in a ditch along the south side of International Gateway. These wetlands were reported as one area in 2003. A culvert has since been installed, breaking the wetland area up into two separate parts. These areas are considered palustrine emergent wetlands with a seasonal hydrologic regime (PEMC) [Cowardin et al. 1979] dominated by narrow-leaved cattail (*Typha angustifolia*), a hydrophytic plant. The soils were disturbed and showed signs of reducing conditions. The wetland's location in a ditch provided evidence of wetland hydrology.

Wetland 16A and 16B were determined to be 0.009 and 0.05 acres, respectively. Collectively, Wetland 16A and 16B scored 17.5 on the ORAM, classifying them as Category 1 wetlands (Mack 2000).

Wetland 17A–17I

Wetlands 17A through 17I (Figure 5; Figure 6, Sheets 1 and 2; Tables 2 and 5; Appendix B: Photograph 21) are a series of ditches north of Runway 10R-28L. They appear to be hydrologically connected to a "Water of the U.S." They are classified as palustrine, emergent wetlands with a seasonal hydrologic regime (PEMC) [Cowardin et al. 1979]. The ditches were dominated by hydrophytic vegetation, including narrow-leaved cattail (*Typha angustifolia*) and nodding beggar tick (*Bidens cernua*). The soil showed signs of reducing conditions. The wetlands' location in a drainage ditch provided evidence of wetland hydrology. Wetlands 17A–17I were scored together on the ORAM as they are functionally identical. They scored 20 on the ORAM, classifying them as Category 1 wetlands (Mack 2000). Wetlands 17A through 17I occupied a total area of 0.60 acres. The acreage for each individual Wetland is summarized in Table 5 below.

Table 5. Summary of Wetlands 17A through 17I.

Wetland	Acreage
17A	0.02
17B	0.17
17C	0.03
17D	0.09
17E	0.03
17F	0.08
17G	0.03
17H	0.02
17I	0.13
Total	0.60

Wetland 18

Wetland 18 is a ditch located south of 5th Avenue (Figure 5; Figure 6, Sheet 5; Table 2). Wetland 18 is dominated by narrow-leaved cattail (*Typha angustifolia*) and is classified as a palustrine, emergent wetland with a seasonal hydrologic regime (PEMC) [Cowardin et al. 1979].

Wetland 18 was determined to be 0.01 acres. It received an ORAM score of 10, classifying it as a Category 1 wetland (Mack 2000).

STREAMS

Three jurisdictional waterways, totaling 8,292 linear feet, were identified in the project area. The delineated boundaries of these areas are presented on Figure 5 and Figure 6, Sheets 2, 3 and 5. All waterways are summarized in Table 6.

Stream 1

Stream 1 is the portion of Big Walnut Creek passing through the survey area (Figure 5; Figure 6, Sheet 3) It is classified as a riverine, lower perennial system with an unconsolidated bottom and permanent hydrologic regime (R2UBH) [Cowardin et al. 1979]. The QHEI score for Big Walnut Creek was determined to be 51.5, which is indicative of fair conditions (Appendix E). Big Walnut Creek had an average width of 75 ft within the project area, and approximately 7,287 linear feet of Big Walnut Creek extends through the project area. The current project area ends at the ordinary high water mark of Big Walnut Creek located east of Hamilton Road.

Stream 2

Stream 2 (Figure 5; Figure 6, Sheet 3; Appendix B: Photograph 22) is a stream draining under Bridgeway Avenue and into Big Walnut Creek. It is classified as a riverine, intermittent streambed with a cobble/gravel substrate (R4SB1) [Cowardin et al. 1979]. It did not have any wetland vegetation. Stream 2 had an average width of 11 ft and a length of approximately 413 ft. Stream 2 was classified as a Class II PHWH (Appendix E).

Stream 3

Stream 3 is an unvegetated ditch located south of Runway 10R-28L (Figure 5; Figure 6; Sheets 2 and 5). It originated and discharged into an underground pipe, so it was not possible to determine whether it had a hydrologic connection to a "Water of the U.S." It would likely be classified as a riverine, intermittent streambed with a mud substrate (R4SB3) [Cowardin et al. 1979]. Stream 3 had an average width of 8.5 ft and a length of approximately 592 ft located in the project area. Stream 3 was classified as a Class I PHWH (Appendix E).

Table 6. Waterway Summary for the Port Columbus International Airport Project Area.

Stream Name	Description	Location	Provisional Stream Classification	Assigned Aquatic Life Use Designation	QHEI Score	HHEI Score	Linear Footage of Jurisdictional Waterways Within the Project Area
Stream #1 (Big Walnut Creek)	Creek	East End of project area	QHEI: Fair	WWH	51.5		7,287
Stream #2	Tributary to Big Walnut	South Bridgeway Avenue	Class II PHWH	N/A		60	413
Stream #3	Unvegetated Ditch	South of Runway 10R-28L	Class I PHWH	N/A		24	592
TOTAL							8,292

OPEN WATER HABITATS

Ponds 1, 2, and 3

Ponds 1, 2, and 3 are water hazards on the public golf course east of Hamilton Road (Figure 5; Figure 6, Sheet 3). They are classified as palustrine, excavated, unconsolidated bottom systems with an intermittently exposed hydrologic regime (PUBGx) [Cowardin et al. 1979]. They appeared to be hydrologically isolated from Big Walnut Creek. While Pond 1 had a few small patches of cattails (*Typha* sp.) and willows (*Salix* sp.) around its edge, it was predominantly unvegetated. Ponds 2 and 3 were completely unvegetated, with gravel and riprap along their banks. The total acreage of the three ponds was 2.98 acres. Pond 1 had an area of 1.13 acres. Pond 2 had an area of 1.40 acres, and Pond 3 had an area of 0.45 acres.

OTHER BIOTIC COMMUNITIES

Forests

There are three main forested areas within the current project area. Two occurred west of Stelzer Road. These were dominated by silver maple (*Acer saccharinum*), sugar maple (*Acer saccharum*), common privet (*Ligustrum vulgare*), arrow-wood (*Viburnum dentatum*), and European buckthorn (*Rhamnus frangula*). The third borders the golf course and Big Walnut creek east of Hamilton Road. The portions of forest that occurred on the upper slopes was dominated by sugar maple (*Acer saccharum*) and northern red oak (*Quercus rubra*) while the lower slopes were dominated by sycamore (*Platanus occidentalis*) and green ash (*Fraxinus pennsylvanica*). The understory was dominated by privet (*Ligustrum vulgare*), bush honeysuckle (*Lonicera maackii*), and, in some places, pawpaw (*Asimina triloba*). The herbaceous layer was generally sparse. A complete listing of vascular flora found throughout the forested areas is presented in Table 7.

Old-Field

An old-field community occurs on the west side of Stelzer Road. Dominants varied to some extent, but redbud (*Agrostis gigantea*), Canada thistle (*Cirsium arvense*), tall fescue (*Festuca elatior*), birdsfoot trefoil (*Lotus corniculatus*), everlasting pea (*Lathyrus latifolius*), old-field panic grass (*Panicum accuminatum* var. *fasciculatum*), and common goldenrod (*Solidago canadensis*) appeared to be prevalent throughout the area. A complete listing of vascular flora found throughout the old-field area is presented in Table 7.

Wasteground

Much of the current project area is mowed and consists of maintained right-of-ways and fields in and around residential, industrial, and commercial properties. These areas are collectively referred to as wasteground.

Wasteground is dominated by a variety of weedy species including oxeye daisy (*Chrysanthemum leucanthemum*), chicory (*Cichorium intybus*), wild carrot (*Daucus carota*), northern crabgrass (*Digitaria sanguinalis*), quack grass (*Elytrigia repens*), tall fescue (*Festuca elatior*), English plantain (*Plantago lanceolata*), Kentucky bluegrass (*Poa pratensis*), yellow foxtail grass (*Setaria glauca*), birdsfoot trefoil (*Lotus corniculatus*), red clover (*Trifolium pratensis*), and white clover (*Trifolium repens*). A complete listing of vascular flora found throughout the wasteground areas is presented in Table 7.

Table 7. Vegetation Summary Table for the Port Columbus International Airport Project Area.

Scientific Name	Common Name	Wasteground	Wetlands	Old-Field	Forests
<i>Abutilon theophrasti</i>	Velvet leaf	X		X	
<i>Acalypha rhomboidea</i>	Rhombic copperleaf	X			
<i>Acer negundo</i>	Box elder		X	X	X
<i>Acer saccharinum</i>	Silver maple		X		X ✓
<i>Acer saccharum</i>	Sugar maple				X ✓
<i>Acer rubrum</i>	Red maple		X		
<i>Achillea millefolium</i>	Yarrow	X			
<i>Aesculus glabra</i>	Ohio buckeye				X
<i>Ageratina altissima</i>	White snakeroot				X
<i>Agrimonia gryposepala</i>	Common agrimony		X		
<i>Agrostis gigantea</i>	Redtop	X		X	
<i>Ailanthus altissima</i>	Tree of Heaven	X		X	
<i>Alisima subcordatum</i>	Southern water plantain		X		
<i>Alliaria petiolata</i>	Garlic mustard				X
<i>Allium canadense</i>	Wild onion				X
<i>Allium vineale</i>	Field-garlic	X			
<i>Ambrosia artemisiifolia</i>	Common ragweed	X			
<i>Ambrosia trifida</i>	Great ragweed	X			
<i>Andropogon virginicus</i>	Broom sedge	X		X	
<i>Apocynum cannabinum</i>	Indian hemp	X		X	
<i>Arctium minus</i>	Common burdock	X			
<i>Asarum canadense</i>	Wild ginger				X
<i>Asclepias incarnata</i>	Swamp milkweed		X		
<i>Asclepias syriaca</i>	Common milkweed	X		X	

Table 7. Vegetation Summary Table for the Port Columbus International Airport Project Area.

Scientific Name	Common Name	Wasteground	Wetlands	Old-Field	Forests
<i>Asimina triloba</i>	Pawpaw				X
<i>Aster novae-angliae</i>	New England aster			X	
<i>Aster pilosus</i>	Heath aster	X		X	
<i>Berberis thunbergii</i>	Japanese barberry				X
<i>Bidens aristosa</i>	Midwestern tickseed sunflower		X		
<i>Bidens cernua</i>	Nodding beggar tick		X		
<i>Bidens frondosa</i>	Devil's beggar-ticks		X		
<i>Bromus japonicus</i>	Japanese brome	X			
<i>Calystegia sepium</i>	Hedge bindweed			X	
<i>Campsis radicans</i>	Trumpet creeper			X	X
<i>Carex annectens</i>	Yellow fox sedge		X		
<i>Carex crinita</i>	Drooping sedge		X		
<i>Carex frankii</i>	Frank's sedge		X		
<i>Carex granularis</i>	Meadow sedge			X	
<i>Carex grayi</i>	Gray's sedge		X		
<i>Carex hirsutella</i>	Hirsute sedge			X	
<i>Carex intumescens</i>	Bladder sedge		X		
<i>Carex lupulina</i>	Hop sedge		X		
<i>Carex normalis</i>	Larger straw sedge		X		
<i>Carex rosea</i>	Stellate sedge				X
<i>Carex squarrosa</i>	Squarrose sedge		X		
<i>Carex tribuloides</i>	Blunt sedge		X		
<i>Carex vulpinoidea</i>	Foxtail sedge		X		
<i>Carya cordiformis</i>	Bitternut hickory				X
<i>Carya ovata</i>	Shagbark hickory				X
<i>Carya tomentosa</i>	Mockernut hickory				X
<i>Celtis occidentalis</i>	Northern hackberry				X
<i>Ceratophyllum demersum</i>	Coontail		X		
<i>Cercis canadensis</i>	Redbud	X			
<i>Chrysanthemum leucanthemum</i>	Oxeye daisy	X			
<i>Chenopodium album</i>	Lambs-quarters	X			
<i>Cichorium intybus</i>	Chicory	X			
<i>Cirsium arvense</i>	Canada thistle	X		X	
<i>Cirsium discolor</i>	Field thistle	X			
<i>Cirsium vulgare</i>	Bull thistle	X			
<i>Conium maculatum</i>	Poison hemlock	X			
<i>Convolvulus arvensis</i>	Field bindweed	X			
<i>Conyza canadensis</i>	Common horseweed	X			
<i>Cornus amomum</i>	Knob-styled dogwood		X	X	

Table 7. Vegetation Summary Table for the Port Columbus International Airport Project Area.

Scientific Name	Common Name	Wasteground	Wetlands	Old-Field	Forests
<i>Coronilla varia</i>	Crown vetch	X			
<i>Crataegus mollis</i>	Downy hawthorn				X
<i>Cuscuta gronovii</i>	Common dodder	X			
<i>Cynodon dactylon</i>	Bermuda grass	X			
<i>Cyperus esculentus</i>	Yellow nut sedge	X			
<i>Cyperus strigosus</i>	False nutsedge		X		
<i>Dactylis glomerata</i>	Orchard grass	X			
<i>Daucus carota</i>	Wild carrot	X			
<i>Desmodium canescens</i>	Hoary tick-trefoil			X	
<i>Digitaria sanguinalis</i>	Northern crabgrass	X			
<i>Dipsacus laciniatus</i>	Cut-leaved teasel	X			
<i>Dryopteris intermedia</i>	Fancy wood fern				X
<i>Duchesnea indica</i>	Indian strawberry	X			
<i>Echinochloa crus-galli</i>	Barnyard grass	X	X		
<i>Elaeagnus angustifolia</i>	Russian olive	X		X	
<i>Elaeagnus umbellata</i>	Autumn olive	X		X	
<i>Eleocharis obtusa</i>	Blunt spike rush		X		
<i>Eleusine indica</i>	Yard-grass	X			
<i>Elytrigia repens</i>	Quack grass	X			
<i>Elymus virginicus</i>	Virginia wild rye				X
<i>Epilobium coloratum</i>	Purple-leaved willow herb		X		
<i>Erigeron annuus</i>	Annual fleabane	X			
<i>Erigeron strigosus</i>	Rough fleabane	X			
<i>Erigeron philadelphicus</i>	Philadelphia fleabane	X			
<i>Eupatorium perfoliatum</i>	Boneset		X		
<i>Eupatorium serotinum</i>	Late eupatorium			X	
<i>Euphorbia maculatum</i>	Prostrate spurge	X			
<i>Euthamia graminifolia</i>	Common flat-topped goldenrod		X		
<i>Fagus grandifolia</i>	American beech				X
<i>Festuca elatior</i>	Tall fescue	X		X	
<i>Fragaria virginiana</i>	Wild strawberry	X			
<i>Fraxinus americana</i>	White ash				X
<i>Fraxinus pennsylvanica</i>	Green ash		X		X
<i>Galium aparine</i>	Cleavers				X
<i>Gaura biennis</i>	Biennial gaura	X		X	
<i>Geum canadense</i>	White avens				X
<i>Gleditsia triacanthos</i>	Honey locust				X
<i>Glechoma hederacea</i>	Ground ivy	X			
<i>Glyceria striata</i>	Fowl mannagrass		X		

Table 7. Vegetation Summary Table for the Port Columbus International Airport Project Area.

Scientific Name	Common Name	Wasteground	Wetlands	Old-Field	Forests
<i>Hamamelis virginiana</i>	Witch hazel				X
<i>Helianthus tuberosus</i>	Jerusalem artichoke			X	
<i>Hemerocallis fulva</i>	Day lily	X			X
<i>Hesperis matronalis</i>	Dame's rocket	X			
<i>Hibiscus moscheutos</i>	Common rose mallow		X		
<i>Hieracium caespitosum</i>	King-devil	X			
<i>Hordeum jubatum</i>	Squirrel tail barley	X			
<i>Hypericum perforatum</i>	Common St. John's wort			X	
<i>Impatiens capensis</i>	Orange touch-me-not		X		
<i>Impatiens pallida</i>	Yellow touch-me-not		X		
<i>Ipomea purpurea</i>	Common morning glory	X			
<i>Juglans nigra</i>	Black walnut				X
<i>Juncus effuses</i>	Soft rush		X		
<i>Juncus tenuis</i>	Path-rush		X		
<i>Juniperus virginiana</i>	Eastern red cedar	X			
<i>Lathyrus latifolius</i>	Everlasting pea	X		X	
<i>Latuca canadensis</i>	Tall lettuce	X			
<i>Lepidium campestre</i>	Fieldcress	X			
<i>Leersia virginica</i>	White grass		X		
<i>Ligustrum vulgare</i>	Common privet				X ✓
<i>Linaria vulgaris</i>	Butter and eggs	X			
<i>Liriodendron tulipifera</i>	Tulip poplar				X
<i>Lobelia cardinalis</i>	Cardinal flower		X		
<i>Lobelia inflata</i>	Indian tobacco				X
<i>Lolium perenne</i>	Ryegrass	X			
<i>Lonicera japonica</i>	Japanese honeysuckle	X			X
<i>Lonicera maackii</i>	Bush honeysuckle	X			X
<i>Lotus corniculatus</i>	Birdsfoot trefoil	X		X	
<i>Lycopus americanus</i>	Water horehound		X		
<i>Lysimachia ciliata</i>	Fringed loosestrife				X
<i>Lysimachia nummularia</i>	Moneywort		X		
<i>Malus coronaria</i>	Wild crabapple			X	
<i>Malus pumila</i>	Common apple	X			
<i>Marrubium vulgare</i>	Common horehound	X			
<i>Matricaria matricarioides</i>	Pineapple weed	X			
<i>Melilotus alba</i>	White sweet clover	X			
<i>Melilotus officinalis</i>	Yellow sweet clover	X			
<i>Mentha spicata</i>	Spearmint		X		
<i>Mimulus ringens</i>	Monkeyflower		X		
<i>Morus alba</i>	White mulberry	X		X	

Table 7. Vegetation Summary Table for the Port Columbus International Airport Project Area.

Scientific Name	Common Name	Wasteground	Wetlands	Old-Field	Forests
<i>Oenothera biennis</i>	Evening primrose	X			
<i>Onoclea sensibilis</i>	Sensitive fern		X		
<i>Osmorhiza longistylis</i>	Smooth sweet cicely				X
<i>Oxalis stricta</i>	Yellow wood sorrel	X			
<i>Panicum accuminatum</i> var. <i>fasciculatum</i>	Old-field panic grass			X	
<i>Panicum vulgatum</i>	Switchgrass			X	
<i>Parthenocissus quinquefolia</i>	Virginia creeper				X
<i>Pastinaca sativa</i>	Wild parsnip	X			
<i>Penstemon digitalis</i>	Fox-glove beardtongue			X	
<i>Penthorum sedoides</i>	Ditch stonecrop		X		
<i>Phleum pratense</i>	Timothy	X			
<i>Phlox paniculata</i>	Summer phlox				X
<i>Phragmites australis</i>	Common reed		X		
<i>Phyla lanceolata</i>	Frog fruit		X		
<i>Phytolacca americana</i>	Pokeweed	X			
<i>Pinus strobes</i>	Eastern white pine	X			
<i>Plantago lanceolata</i>	English plantain	X			
<i>Plantago rugelii</i>	American plantain	X			
<i>Platanus occidentalis</i>	Sycamore				X
<i>Poa annua</i>	Speargrass	X			
<i>Poa pratensis</i>	Kentucky bluegrass	X			
<i>Poa trivialis</i>	Rough bluegrass	X			
<i>Podophyllum peltatum</i>	Mayapple				X
<i>Polygala sanguinea</i>	Field milkwort			X	
<i>Polygonum aviculare</i>	Common knotweed	X			
<i>Polygonum caespitosum</i>	Knotweed	X			
<i>Polygonum convolvulus</i>	Black bindweed	X			
<i>Polygonum hydropiperoides</i>	False water pepper		X		
<i>Polygonum pensylvanicum</i>	Pennsylvania smartweed		X		
<i>Polygonum punctatum</i>	Dotted smartweed		X		
<i>Polygonum virginicum</i>	Jumpseed				X
<i>Populus alba</i>	White poplar	X			
<i>Populus deltoides</i>	Cottonwood		X		X
<i>Potentilla simplex</i>	Common cinquefoil	X			
<i>Prunella vulgaris</i>	Self-heal	X			
<i>Prunus serotina</i>	Black cherry	X			
<i>Quercus alba</i>	White oak	X			
<i>Quercus bicolor</i>	Swamp white oak		X		
<i>Quercus palustris</i>	Pin oak		X		

Table 7. Vegetation Summary Table for the Port Columbus International Airport Project Area.

Scientific Name	Common Name	Wasteground	Wetlands	Old-Field	Forests
<i>Quercus rubra</i>	Northern red oak	X			X
<i>Rhamnus frangula</i>	European buckthorn		X		X
<i>Rhus typhina</i>	Staghorn sumac			X	
<i>Robinia psuedoacacia</i>	Black Locust	X			
<i>Rosa carolina</i>	Pasture rose			X	
<i>Rosa multiflora</i>	Multiflora rose	X			
<i>Rubus allegheniensis</i>	Common blackberry	X		X	
<i>Rubus flagellaris</i>	Northern dewberry			X	
<i>Rudbeckia hirta</i>	Black-eyed Susan	X			
<i>Rudbeckia laciniata</i>	Cut-leaf coneflower				X
<i>Rudbeckia triloba</i>	Three-lobed coneflower			X	
<i>Rumex crispus</i>	Curly dock	X			
<i>Rumex obtusifolius</i>	Bitter dock			X	
<i>Sagittaria latifolia</i>	Common arrowhead		X		
<i>Sambucus canadensis</i>	Elderberry			X	
<i>Sassafras albidum</i>	Sassafras			X	X
<i>Salix babylonica</i>	Weeping willow	X			
<i>Salix nigra</i>	Black willow		X		
<i>Salvia lyrata</i>	Lyre-leaved sage	X			
<i>Scirpus atrovirens</i>	Black bulrush		X		
<i>Scirpus cyperinus</i>	Woolgrass		X		
<i>Scrophularia marilandica</i>	Maryland figwort				X
<i>Scutellaria lateriflora</i>	Mad-dog skullcap		X		
<i>Setaria faberi</i>	Giant foxtail grass	X			
<i>Setaria glauca</i>	Yellow foxtail grass	X			
<i>Solanum carolinense</i>	Horse nettle	X			
<i>Solanum dulcamara</i>	Bittersweet nightshade	X			
<i>Solidago caesia</i>	Zigzag goldenrod				X
<i>Solidago canadensis</i>	Common goldenrod	X		X	
<i>Sonchus asper</i>	Prickly sow thistle	X			
<i>Sonchus oleraceus</i>	Common sow thistle	X			
<i>Sorghum halepense</i>	Johnson grass	X			
<i>Spiranthes vernalis</i>	Spring ladies tresses			X	
<i>Taraxacum officinale</i>	Dandelion	X			
<i>Thalaspis arvensis</i>	Field pennycress	X			
<i>Tilia americana</i>	Basswood				X
<i>Toxicodendron radicans</i>	Poison ivy		X		X
<i>Trifolium pratensis</i>	Red clover	X			
<i>Trifolium campestre</i>	Pinnate hop clover	X			
<i>Trifolium hybridum</i>	Alsike's clover	X		X	

Table 7. Vegetation Summary Table for the Port Columbus International Airport Project Area.

Scientific Name	Common Name	Wasteground	Wetlands	Old-Field	Forests
<i>Trifolium repens</i>	White clover	X			
<i>Teuchrium canadense</i>	Woodsage				X
<i>Typha angustifolia</i>	Narrow-leaved cattail		X		
<i>Typha latifolia</i>	Common cattail		X		
<i>Ulmus americana</i>	American elm		X		X
<i>Verbascum thapsus</i>	Common mullein				
<i>Verbena hastata</i>	Blue vervain		X		
<i>Verbena urticifolia</i>	White vervain			X	
<i>Verbesina alternifolia</i>	Wingstem				X
<i>Vernonia gigantea</i>	Tall ironweed	X		X	
<i>Veronica arvensis</i>	Corn speedwell	X			
<i>Veronica filiformis</i>	Slender speedwell	X			
<i>Viburnum dentatum</i>	Arrowwood		X		X
<i>Viola sororia</i>	Common blue violet				X
<i>Vitis aestivalis</i>	Summer grape				X
<i>Xanthium strumarium</i>	Common cocklebur	X			

Wildlife

During the field survey, the presence of 30 bird species, six mammal species, and one amphibian species were observed directly, either alive, as road kill, or through evidence such as scat, tracks, or calls (Tables 8 and 9). All species encountered were considered typical and common for urban areas. These included such species as raccoon (*Procyon lotor*), groundhog (*Marmota monax*), house sparrow (*Passer domesticus*), starling (*Sturnus vulgaris*), northern cardinal (*Cardinalis cardinalis*), and the blue jay (*Cyanocitta cristata*).

Table 8. Bird Summary Table for the Port Columbus International Airport Project Area.

Scientific Name	Common Name
<i>Ardea herodias</i>	Great blue heron
<i>Branta canadensis</i>	Canada goose
<i>Charadrius vociferus</i>	Killdeer
<i>Columba livia</i>	Rock dove
<i>Contopus virens</i>	Eastern pewee
<i>Corvus brachyrhynchos</i>	American crow
<i>Melospiza melodia</i>	Song sparrow
<i>Mimus polygottos</i>	Northern mockingbird
<i>Picoides pubescens</i>	Downy woodpecker

Table 8. Bird Summary Table for the Port Columbus International Airport Project Area.

Scientific Name	Common Name
<i>Aix sponsa</i>	Wood duck
<i>Anas platyrhynchos</i>	Mallard
<i>Bombycilla garrulus</i>	Cedar waxwing
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Butorides striatus</i>	Green heron
<i>Cardinalis cardinalis</i>	Northern cardinal
<i>Carduelis tristis</i>	American goldfinch
<i>Cyanocitta cristata</i>	Blue jay
<i>Dumetella carolinensis</i>	Gray catbird
<i>Hirundo rustica</i>	Barn swallow
<i>Iridoprocne bicolor</i>	Tree swallow
<i>Megaceryle alcyon</i>	Belted Kingfisher
<i>Parus atricapillus</i>	Black-capped chickadee
<i>Passer domesticus</i>	House sparrow
<i>Quiscalus quiscula</i>	Common Grackle
<i>Sitta carolinensis</i>	White breasted nuthatch
<i>Sturnus vulgaris</i>	European Starling
<i>Thryothorus ludovicianus</i>	Carolina wren
<i>Turdus migratorius</i>	American robin
<i>Vireo olivaceus</i>	Red eyed vireo
<i>Zenaidura macroura</i>	Mourning dove

Table 9. Mammals and Amphibians Summary Table for the Port Columbus International Airport Project Area.

Scientific Name	Common Name
Mammals	
<i>Marmota monax</i>	Groundhog
<i>Odocoileus virginianus</i>	White-tailed deer
<i>Procyon lotor</i>	Raccoon
<i>Sciurus niger</i>	Fox squirrel
<i>Sylvilagus floridanus</i>	Eastern cottontail
<i>Tamias striatus</i>	Eastern chipmunk
Amphibians	
<i>Rana clamitans</i>	Green frog

ENDANGERED SPECIES

The ODNR has no records for any rare or endangered species in the current project area or within a 1-mile radius (Appendix A: ODNR 2006). The ODNR found no records of existing or proposed state nature preserves, scenic rivers, unique ecological sites, geologic features, breeding or nonbreeding animal concentrations, champion trees, or state parks, forests, or wildlife areas within 1 mile of the project area (Appendix A: ODNR 2006).

The ranges of four federally endangered species and one federal candidate species include Franklin County (Table 10). The federally endangered Scioto madtom (*Noturus trautmani*) has been documented only in Big Darby Creek, and is assumed to be extinct. The federally endangered northern riffleshell mussel (*Epioblasma torulosa rangiana*) and clubshell mussel (*Pleurobema clava*), as well as the federal candidate species, rayed bean mussel (*Villosa fabalis*), occur in sand and gravel riffles and runs in streams. Big Walnut Creek contains suitable habitat for these species, but none of these species have been documented in Big Walnut Creek within 1 mile of the project area (Appendix A: ODNR 2006). Furthermore, USFWS (2006b) stated that the project as proposed would have no impact on the clubshell mussel, northern riffleshell mussel, rayed bean mussel, and Scioto madtom. Table 10 below provides a summary of preferred habitat and habitat within the project area for each of the species previously mentioned.

The federally endangered Indiana bat (*Myotis sodalis*) roosts in trees with cavities or peeling bark, and prefers to forage in stream corridors, woodlots, and riparian corridors. Suitable roost trees (Photograph 23) and feeding corridors are present within the second-growth forest areas of the project area and along Big Walnut Creek. Approximately 21 suitable roost trees for the Indiana bat were present within the second-growth forest areas of the project area and along Big Walnut Creek (Figure 5; 6, Sheets 1, 3, and 4). However, the nearest Indiana bat record is approximately 44 miles southeast in Falls Gore Township, Hocking County (Appendix A: ODNR 2006). The USFWS (2006b) recommends that suitable roost trees be avoided if possible and that if cutting is unavoidable, further coordination with the USFWS is requested to determine if surveys are warranted.

Table 10. Federally Endangered and Candidate Species Whose Ranges Include Franklin County (USFWS 2006).

Scientific Name	Common Name	Federal Status	Ohio Status	Habitat	Potential Habitat Present in the Project Area
<i>Epioblasma torulosa rangiana</i>	Northern riffleshell mussel	E	E	Large streams and small rivers in the firm sand of riffle areas	Yes. Big Walnut Creek contains suitable habitat for this species, but the species has not been documented within 1 mile of the project area (Appendix A: ODNR 2006).
<i>Myotis sodalis</i>	Indiana bat	E	E	Maternity roosts in small stream corridors with well developed riparian woods, upland forests	Yes. Several foraging areas as well as potential roost trees are located in wooded areas and along Big Walnut Creek, but the species has not been documented within 1 mile of the project area (Appendix A: ODNR 2006).
<i>Noturus trautmani</i>	Scioto madtom (fish)	E	E	Stream riffles of moderate flow over sandy gravel bottom	Yes. Big Walnut Creek contains suitable habitat for this species, but the species has not been documented within 1 mile of the project area (Appendix A: ODNR 2006).
<i>Pleurobema clava</i>	Clubshell mussel	E	E	Coarse sand and gravel areas of runs and riffles within streams and small rivers	Yes. Big Walnut Creek contains suitable habitat for this species, but the species has not been documented within 1 mile of the project area (Appendix A: ODNR 2006).
<i>Villosa fabalis</i>	Rayed bean mussel	C	E	Small, shallow rivers, in and near riffles, where it is buried deep in sand and/or gravel, often near aquatic vegetation. The rayed bean mussel is also found in slow flowing rivers, and along the shallow, wave-swept shores of lakes	Yes. Big Walnut Creek contains suitable habitat for this species, but the species has not been documented within 1 mile of the project area (Appendix A: ODNR 2006).

E = endangered, C = candidate species. The Scioto madtom is considered extinct.

SUMMARY

A combination of 66 USACOE jurisdictional and non-jurisdictional "Waters of the U.S." occur in the current project area, including 60 wetlands, three ponds, and three streams. All areas were previously reported in 2003 (Liptak and Queen 2003). The only new changes observed include the division of Wetland 16. This area is now divided into two parts, 16A and 16B, from the installation of a culvert. Also, in the 2003 Wetland Delineation report (Liptak and Queen 2003) Wetland 14 was divided into 3 segments. The middle portion of this wetland is now gone. The area has been culverted and paved over for the construction of a parking lot. No new wetlands or other jurisdictional waters were encountered in those areas that were not surveyed in 2003, but are now included in the current project area.

A total of 60 wetlands occupying 10.57 acres were delineated in the project area. Fifty wetlands equaling (8.62 acres) are Category 1 wetlands. A total of five wetlands (1.60 acres) are Category 2 wetlands, and five wetlands (0.35 acres) are determined to be Modified Category 2 wetlands. In addition, three ponds were identified in the project area. The total acreage of the three ponds was 2.98 acres.

Three jurisdictional waterways, totaling 8,292 linear feet, were identified in the project area. Streams 2 and 3 are considered headwater streams while Stream 1 (Big Walnut Creek) is considered a non-headwater stream.

The wetlands, ponds and waterways would be considered jointly by regulatory agencies when considering wetland, stream and water quality impacts. Pursuant to Section 404 of the Clean Water Act, the USACOE has jurisdiction over the placement of fill or dredged material in all jurisdictional "Waters of the United States". A Section 404 permit must be obtained prior to placing any fill material within a jurisdictional area. Non-jurisdictional wetlands are typically isolated wetland areas. Under most circumstances these wetlands are regulated by the Ohio Environmental Protection Agency (OEPA) and require either a General or Individual Isolated Wetland Permit for dredge and fill activities.

The ODNR had no records for any threatened or endangered species within a 1-mile radius of the current project area (Appendix A: ODNR 2006). The ODNR found no records of existing or proposed state nature preserves, scenic rivers, unique ecological sites, geologic features, breeding or nonbreeding animal concentrations, champion trees, or state parks, forests or wildlife areas within 1 mile of the project area (Appendix A: ODNR 2006).

The ranges of the federally endangered Scioto madtom (*Noturus trautmani*), northern riffleshell mussel (*Epioblasma torulosa rangiana*), clubshell mussel (*Pleurobema clava*), and Indiana bat (*Myotis sodalis*), and the federal candidate, rayed bean mussel (*Villosa fabalis*), include Franklin County (USFWS 2006a, 2006b). However, the ODNR had no records for any of these species within a 1-mile radius of the current project area (Appendix A: ODNR 2006). Furthermore, USFWS (2006b) stated that the project as proposed should have no impact on the clubshell mussel, northern riffleshell mussel, rayed bean mussel and Scioto madtom individuals or habitat.

Approximately 21 suitable roost trees for the Indiana bat were present within the second-growth forest areas of the project area and along Big Walnut Creek (Figure 5; Figure 6, Sheets 1, 3, and 4). Suitable foraging habitat is also present along Big Walnut Creek. However, no individuals were observed during the survey.

The project area includes areas of 100-year floodplain in the eastern portion of the project area, surrounding Big Walnut Creek (Figure 5; Figure 6, Sheets 2 and 3). However, most of the project area is outside the 100-year floodplain.

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FIGURES

APPENDIX A: AGENCY CORRESPONDENCE



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4127
(614) 469-6923 / FAX (614) 469-6919
September 18, 2006

Len Mikles
ASC Group, Inc.
4620 Indianola Ave.
Columbus, OH 43214

Dear Mr. Mikles:

This is in response to your August 11, 2006 letter received on August 14 requesting technical assistance regarding Federally-listed species that may occur at the Port Columbus International Airport Project (# 1617) south of the U.S. 62 and I-270 Interchange in Franklin County, Columbus, Ohio. The project involves the proposed runway expansion at the airport.

There are no Federal wilderness areas, wildlife refuges, or designated Critical Habitat within the vicinity of the proposed site.

ENDANGERED SPECIES COMMENTS: The proposed project lies within the range of the **Indiana bat** (*Myotis sodalis*), a Federally-listed endangered species. Since first listed as endangered in 1967, their population has declined by nearly 60%. Several factors have contributed to the decline of the Indiana bat, including the loss and degradation of suitable hibernacula, human disturbance during hibernation, pesticides, and the loss and degradation of forested habitat, particularly stands of large, mature trees. Fragmentation of forest habitat may also contribute to declines. Summer habitat requirements for the species are not well defined but the following are considered important:

- (1) dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas;
- (2) live trees (such as shagbark hickory and oaks) which have exfoliating bark;
- (3) stream corridors, riparian areas, and upland woodlots which provide forage sites.

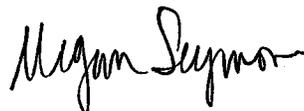
Should the proposed site contain trees or associated habitats exhibiting any of the characteristics listed above, we recommend that the habitat and surrounding trees be saved wherever possible. If the trees must be cut, further coordination with this office is requested to determine if surveys are warranted. Any survey should be designed and conducted in coordination with the Endangered Species Coordinator for this office.

The project also lies within the range of the Federally-listed endangered **Scioto madtom** (*Noturus trautmani*), **clubshell** (*Pleurobema clava*), and **northern riffleshell** (*Epioblasma torulosa rangiana*), and the **rayed bean** (*Villosa fabalis*), a Federal candidate species. Due to the project type, size, and location, the project should not impact these species or their habitat.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act of 1973, as amended, and are consistent with the intent of the National Environmental Policy Act of 1969 and the U. S. Fish and Wildlife Service's Mitigation Policy.

If you have any questions concerning your request, please contact Angela Zimmerman at (614) 469-6923 extension 22.

Sincerely,



for Mary Knapp, Ph.D.
Field Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH



Ohio Department of Natural Resources

BOB TAFT, GOVERNOR

SAMUEL W. SPECK, DIRECTOR

Division of Natural Areas and Preserves

Tom Linkous, Chief

2045 Morse Rd., Bldg. F-1

Columbus, OH 43229-6693

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

August 10, 2006

Len Mikles
ASC Group, Inc.
4620 Indianola Ave.
Columbus, OH 43214

Dear Mr. Mikles:

After reviewing our Natural Heritage maps and files, I find the Division of Natural Areas and Preserves has no records of rare or endangered species in the Port Columbus International Airport Runway Expansion project area, including a one mile radius, in Columbus, Franklin County, and on the Northeast Columbus, New Albany, Reynoldsburg and Southeast Columbus Quads (1617). We also have no records for Indiana Bat (*Myotis sodalis*, state endangered, federal endangered) capture locations or hibernacula within a five mile radius of the project site. The nearest Indiana Bat record is approximately 44 miles away in Falls Gore Township, Hocking County.

There are no existing or proposed state nature preserves or scenic rivers at the project site. We are also unaware of any unique ecological sites, geologic features, breeding or non-breeding animal concentrations or state parks, forests or wildlife areas within a one mile radius of the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas. Also, we do not have data for all Ohio wetlands. For National Wetlands Inventory maps, please contact Madge Fitak in the Division of Geological Survey at 614-265-6576.

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

Sincerely,

Debbie Woischke, Ecological Analyst
Natural Heritage Program

APPENDIX B: PHOTOGRAPHS



Photograph 1. Edge of Wetland 1, facing north into wetland.



Photograph 2. Edge of Wetland 2, facing north into wetland.



Photograph 3. Edge of Wetland 3, facing east into wetland.



Photograph 4. Edge of Wetland 4, facing east into wetland.



Photograph 5. Edge of Wetland 5, facing northeast into wetland.



Photograph 6. Edge of Wetland 6, facing west into wetland.



Photograph 7. **Edge** of Wetland 7, facing northwest into wetland.



Photograph 8. **Edge** of Wetland 8, facing north into wetland.



Photograph 9. Edge of Wetland 9, facing east into wetland.



Photograph 10. Edge of Wetland 10, facing north into wetland.



Photograph 11. Wetland 11A in mowed old-field, facing north.



Photograph 12. Edge of Wetland 11B, facing northeast into wetland.



Photograph 13. Edge of Wetland 11N, facing north.



8
Photograph 14. Edge of Wetland 11J in mowed field, facing north.



Photograph 15. Wetland 11Z and surrounding old-field area, facing west.



Photograph 16. Wetland 12A, facing south into wetland.



Photograph 17. Wetland 12C in mowed field, facing northwest.



Photograph 18. Wetland 14A, facing northwest.



Photograph 19. Wetland 15A, facing east.



Photograph 20. Wetland 16, facing east.



Photograph 21. Wetland 17B, facing east, showing wetland and upland sample plots.



Photograph 22. Stream 2, facing upstream (southwest).



Photograph 23. Representative photo of a potential Indiana bat roost tree, looking north.

APPENDIX C: WETLAND DETERMINATION FORMS

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Wetland 1
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u>		
(If needed, explain on reverse.)		Data Point #: 1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Ulmus americana</i>	Tree	FACW-	9.		
2. <i>Acer saccharinum</i>	Tree	FACW	10.		
3. <i>Populus deltoides</i>	Tree	FAC	11.		
4. <i>Toxicodendron radicans</i>	Vine	FAC	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. <input checked="" type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-12	A	10YR 4/2	7.5YR 4/4	CMP	Loam
12-16	B	10YR 5/2	7.5YR 5/4	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus international Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u> Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		Community ID: Non-wetland Data Point #: 2

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Acer saccharinum</i>	Tree	FACW	9. <i>Lonicera maackii</i>	Shrub	UPL
2. <i>Fraxinus americana</i>	Tree	FACU	10.		
3. <i>Rubus alleghaniensis</i>	Shrub	FACU-	11.		
4. <i>Prunus serotina</i>	Tree	FACU	12.		
5. <i>Rhamnus cathartica</i>	Shrub	FACU	13.		
6. <i>Rosa multiflora</i>	Shrub	FACU	14.		
7. <i>Toxicodendron radicans</i>	Vine	FAC	15.		
8. <i>Viburnum dentatum</i>	Shrub	FAC	16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 22.2%					
Remarks: Less than half of the dominant species are hydrophytic. This observation does not satisfy the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. <input checked="" type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 4/2	7.5YR 4/4	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	Yes	<u>No</u>	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	Yes <u>No</u> (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies only two of the three criteria and is not a wetland.			

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006	
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin	
Investigator: Landon McKinney	State: Ohio	
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 2	
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? (If needed, explain on reverse.) Yes <u>No</u>		
		Data Point #: 3

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Acer saccharinum</i>	Tree	FACW	9.		
2. <i>Fraxinus pensylvanica</i>	Tree	FACW	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. <input checked="" type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-12	A	10YR 4/2	7.5YR 5/8	CMP	SiCL
12-16	B	10YR 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006	
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin	
Investigator: Landon McKinney	State: Ohio	
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 3	
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		
		Data Point #: 4

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Quercus palustris</i>	Tree	FACW	9.		
2. <i>Acer saccharinum</i>	Tree	FACW	10.		
3. <i>Acer negundo</i>	Tree	FAC+	11.		
4. <i>Glyceria striata</i>	Grass	OBL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 4/2	5YR 4/6	CMP	CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus international Airport	Date: 8.8.2006	
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin	
Investigator: Landon McKinney	State: Ohio	
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Non-wetland	
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		
		Data Point #: 5

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Acer saccharinum</i>	Tree	FACW	9.		
2. <i>Crataegus crus-galli</i>	Tree	FACU	10.		
3. <i>Lonicera tatarica</i>	Shrub	FACU	11.		
4. <i>Boehmeria cylindrica</i>	Forb	FACW+	12.		
5. <i>Rhamnus cathartica</i>	Shrub	FACU	13.		
6. <i>Toxicodendron radicans</i>	Vine	FAC	14.		
7. <i>Viburnum dentatum</i>	Shrub	FAC	15.		
8.			16.		

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

Remarks:
Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other X No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves X Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Sufficient indicators of wetland hydrology were not observed. This observation does not satisfy the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 4/2	7.5YR 4/6	CMP	SiL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	Yes <u>No</u>	Yes <u>No</u> (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies only two of the three criteria and is not a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 4 Data Point #: 6
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Acer saccharinum</i>	Tree	FACW	9.		
2. <i>Fraxinus pensylvanica</i>	Tree	FACW	10.		
3. <i>Viburnum dentatum</i>	Shrub	FAC	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. <input checked="" type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 4/2	7.5YR 5/6	CMP	SiCL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			<input checked="" type="checkbox"/> Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006	
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin	
Investigator: Landon McKinney	State: Ohio	
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 5	
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		
		Data Point #: 7

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Acer saccharinum</i>	Tree	FACW	9.		
2. <i>Fraxinus pensylvanica</i>	Tree	FACW	10.		
3. <i>Viburnum dentatum</i>	Shrub	FAC	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other X No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits X Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. X Water-Stained Leaves X Local Soil Survey Data X FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 4/2	7.5YR 5/6	CMP	SiCL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u> Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	Community ID: Wetland 6 Data Point #: 8

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Acer saccharinum</i>	Tree	FACW	9.		
2. <i>Scirpus cyperinus</i>	Sedge	FACW+	10.		
3. <i>Viburnum dentatum</i>	Shrub	FAC	11.		
4. <i>Glyceria striata</i>	Grass	OBL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other X No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits X Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves X Local Soil Survey Data X FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-12	A	10YR 4/2	5YR 5/6	CMP	CL
12-16	B	10YR 5/2	7.5YR 5/6	CMP	CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 7 Data Point #: 9
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Acer saccharinum</i>	Tree	FACW	9.		
2. <i>Scirpus cyperinus</i>	Sedge	FACW+	10.		
3. <i>Viburnum dentatum</i>	Shrub	FAC	11.		
4. <i>Glyceria striata</i>	Grass	OBL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other X No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits X Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves X Local Soil Survey Data X FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-12	A	10YR 4/2	5YR 5/6	CMP	CL
12-16	B	10YR 5/2	7.5YR 5/6	CMP	CL
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			<input checked="" type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Wetland 8 Data Point #: 10
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Quercus palustris</i>	Tree	FACW	9.		
2. <i>Ulmus americana</i>	Tree	FACW-	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. <input checked="" type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 4/2	7.5YR 5/6	CMP	SiL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 9 Data Point #: 11
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Quercus palustris</i>	Tree	FACW	9.		
2. <i>Ulmus americana</i>	Tree	FACW-	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. <input checked="" type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 4/2	7.5YR 5/6	CMP	SiL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 10 Data Point #: 12
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area?	Yes <u>No</u>	
(If needed, explain on reverse.)		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Quercus palustris</i>	Tree	FACW	9.		
2. <i>Acer saccharinum</i>	Tree	FAC	10.		
3. <i>Rhamnus frangula</i>	Shrub	FAC	11.		
4. <i>Viburnum dentatum</i>	Shrub	FAC	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. <input checked="" type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 4/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 11A Data Point #: 13
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/1	7.5YR 5/8	CMP	CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 11B Data Point #: 14
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other X No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits X Drainage Patterns in Wetlands Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 in. X Water-Stained Leaves X Local Soil Survey Data X FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	5YR 4/4	CMP	CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Wetland 11C
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u>		
(If needed, explain on reverse.)		Data Point #: 15

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 in. <input checked="" type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	5YR 4/4	CMP	CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	5YR 4/4	CMP	CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus international Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Non-wetland Data Point #: 17
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Setaria viridis</i>	Grass	UPL	9.		
2. <i>Fraxinus pennsylvanica</i>	Tree	FACW	10.		
3. <i>Rubus alleghaniensis</i>	Shrub	FACU-	11.		
4. <i>Oxalis stricta</i>	Forb	UPL	12.		
5. <i>Apocynum cannabinum</i>	Forb	FACU	13.		
6. <i>Trifolium pratense</i>	Forb	FACU-	14.		
7. <i>Rosa multiflora</i>	Shrub	FACU	15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 14.3%					
Remarks: Less than half of the dominant species are hydrophytic. This observation does not satisfy the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Sufficient indicators of wetland hydrology were not observed. This observation does not satisfy the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	5YR 4/4	CMP	CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	Yes	<u>No</u>	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	Yes	<u>No</u>	Yes <u>No</u> (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies only one of the three criteria and is not a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 11E Data Point #: 18
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 11F Data Point #: 18a
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Wetland 111 Data Point #: 21
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u>		
(If needed, explain on reverse.)		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pennsylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 11J Data Point #: 22
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area?	Yes <u>No</u>	
(If needed, explain on reverse.)		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pennsylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 11K Data Point #: 23
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other X No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves X Local Soil Survey Data X FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 11L Data Point #: 24
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006	
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin	
Investigator: Landon McKinney	State: Ohio	
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 11M	
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		
		Data Point #: 25

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
 The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other X No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves X Local Soil Survey Data X FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 11N Data Point #: 26
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> <u>No</u> Is the site significantly disturbed (Atypical Situation)? <u>Yes</u> <u>No</u> Is the area a potential Problem Area? <u>Yes</u> <u>No</u> (If needed, explain on reverse.)	Community ID: Wetland 110 Data Point #: 27

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pennsylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other X No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves X Local Soil Survey Data X FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 11P Data Point #: 28
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pennsylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 11Q Data Point #: 29
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u>	
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other X No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves X Local Soil Survey Data X FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006	
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin	
Investigator: Landon McKinney	State: Ohio	
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 11R	
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		
		Data Point #: 30

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 11S Data Point #: 31
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 11T Data Point #: 32
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u>	
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pennsylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 11U Data Point #: 33
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 11W Data Point #: 35
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pennsylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 11X Data Point #: 36
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 11Y Data Point #: 37
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 11Z Data Point #: 38
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u>	
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fraxinus pensylvanica</i>	Tree	FACW	9.		
2. <i>Lysimachia nummularia</i>	Forb	OBL	10.		
3. <i>Juncus effusus</i>	Sedge	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus international Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Non-wetland Data Point #: 39
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area?	Yes <u>No</u>	
(If needed, explain on reverse.)		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Setaria viridis</i>	Grass	UPL	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 0%

Remarks:
Less than half of the dominant species are hydrophytic. This observation does not satisfy the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >20 (in.)	
Remarks: Sufficient indicators of wetland hydrology were not observed. This observation does not satisfy the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-20	A	10YR 4/3			Loam
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were not observed. This observation does not satisfy the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	Yes	<u>No</u>	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	Yes	<u>No</u>	Yes <u>No</u> (Circle)
Hydric Soils Present?	Yes	<u>No</u>	
Remarks: This area satisfies none of the three criteria and is not a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 12A Data Point #: 40
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Scirpus cyperinus</i>	Sedge	FACW+	9.		
2. <i>Juncus effusus</i>	Sedge	FACW+	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other X No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. X Water-Stained Leaves X Local Soil Survey Data X FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport	Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 12B Data Point #: 41
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Scirpus cyperinus</i>	Sedge	FACW+	9.		
2. <i>Juncus effusus</i>	Sedge	FACW+	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. <input checked="" type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 12C Data Point #: 42
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Scirpus cyperinus</i>	Sedge	FACW+	9.		
2. <i>Juncus effusus</i>	Sedge	FACW+	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. <input checked="" type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 12D Data Point #: 43
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area?	Yes <u>No</u>	
(If needed, explain on reverse.)		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Scirpus cyperinus</i>	Sedge	FACW+	9.		
2. <i>Juncus effusus</i>	Sedge	FACW+	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
The vegetation in this area was mowed at the time of investigation. Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other X No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. X Water-Stained Leaves X Local Soil Survey Data X FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus international Airport		Date: 8.8.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Non-wetland Data Point #: 44
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Rubus allegheniensis</i>	Shrub	FACU-	9.		
2. <i>Rosa multiflora</i>	Shrub	FACU	10.		
3. <i>Poa pratensis</i>	Grass	FACU	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 0%					
Remarks: The vegetation in this area was mowed at the time of investigation. Less than half of the dominant species are hydrophytic. This observation does not satisfy the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks):
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >16 (in.)	
Remarks: Sufficient indicators of wetland hydrology were not observed. This observation does not satisfy the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	7.5YR 4/6	CMP	CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	Yes	<u>No</u>	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	Yes	<u>No</u>	Yes <u>No</u> (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: This area satisfies one of the three criteria. This area is not a wetland.			

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 14A Data Point #: 46
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Scirpus cyperinus</i>	Sedge	FACW+	9.		
2. <i>Typha angustifolia</i>	Forb	OBL	10.		
3. <i>Echinochloa crus-galli</i>	Grass	FACU	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC
(Excluding FAC-): 66.7%

Remarks:
Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport	Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 14B Data Point #: 47
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Scirpus cyperinus</i>	Sedge	FACW+	9.		
2. <i>Typha angustifolia</i>	Forb	OBL	10.		
3. <i>Echinocloa crus-galli</i>	Grass	FACU	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC
(Excluding FAC-). 66.7%

Remarks:
Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Wetland 15A
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u>		
(If needed, explain on reverse.)		Data Point #: 48

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Wetland 15B
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u>		
(If needed, explain on reverse.)		Data Point #: 49

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Wetland 15C
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u>		
(If needed, explain on reverse.)		Data Point #: 50

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol. Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u> Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		Community ID: Wetland 15D Data Point #: 51

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Wetland 15E
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u>		
(If needed, explain on reverse.)		Data Point #: 52

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus international Airport		Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Non-wetland Data Point #: 53
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Poa pratensis</i>	Grass	UPL	9.		
2. <i>Festuca elatior</i>	Grass	UPL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC
(Excluding FAC-). 0%

Remarks:
Less than half of the dominant species are hydrophytic. This observation does not satisfy the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >4 (in.)	
Remarks: Sufficient indicators of wetland hydrology were not observed. This observation does not satisfy the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-4	A	10YR 4/4			SL
4+	Impenetrable Fill				
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were not observed. This observation does not satisfy the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	Yes	<u>No</u>	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	Yes	<u>No</u>	Yes <u>No</u> (Circle)
Hydric Soils Present?	Yes	<u>No</u>	
Remarks: This area satisfies none of the three criteria and is not a wetland.			

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

Project/Site: Port Columbus International Airport	Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 16A Data Point #: 54
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u> Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	Community ID: Wetland 16B Data Point #: 54a

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus international Airport		Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Non-wetland Data Point #: 55
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Poa pratensis</i>	Grass	UPL	9.		
2. <i>Festuca elatior</i>	Grass	UPL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 0%					
Remarks: Less than half of the dominant species are hydrophytic. This observation does not satisfy the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >4 (in.)	
Remarks: Sufficient indicators of wetland hydrology were not observed. This observation does not satisfy the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-4	A	10YR 4/4			SL
4+	Impenetrable Fill				
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were not observed. This observation does not satisfy the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	Yes	<u>No</u>	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	Yes	<u>No</u>	Yes <u>No</u> (Circle)
Hydric Soils Present?	Yes	<u>No</u>	
Remarks: This area satisfies none of the three criteria and is not a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Wetland 17A Data Point #: 56
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2. <i>Bidens cernua</i>	Forb	OBL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport	Date: 8.1.2006	
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin	
Investigator: Landon McKinney	State: Ohio	
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 17B	
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		
		Data Point #: 57

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2. <i>Bidens cernua</i>	Forb	OBL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport		Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Wetland 17C Data Point #: 58
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2. <i>Bidens cernua</i>	Forb	OBL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport	Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 17D Data Point #: 59
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2. <i>Bidens cernua</i>	Forb	OBL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.		

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Wetland 17F
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u>		
(If needed, explain on reverse.)		Data Point #: 61

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2. <i>Bidens cernua</i>	Forb	OBL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.		

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u>	No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u>	No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u>	No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.			

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

Project/Site: Port Columbus International Airport		Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No		Community ID: Wetland 17H Data Point #: 63
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2. <i>Bidens cernua</i>	Forb	OBL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin
Investigator: Landon McKinney	State: Ohio
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 171 Data Point #: 64
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>	
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2. <i>Bidens cernua</i>	Forb	OBL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

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

Remarks:
Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.		

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):				Drainage Class: Field Observations Confirm Mapped Type? Yes No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-4	A	10YR 4/4			SL
4+	Impenetrable Fill				
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were not observed. This observation does not satisfy the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	Yes <u>No</u>	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	Yes <u>No</u>	Yes <u>No</u> (Circle)
Hydric Soils Present?	Yes <u>No</u>	
Remarks: This area satisfies none of the three criteria and is not a wetland.		

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

Project/Site: Port Columbus International Airport	Date: 8.1.2006	
Applicant/Owner: Columbus Municipal Airport Authority	County: Franklin	
Investigator: Landon McKinney	State: Ohio	
Do Normal Circumstances exist on the site? <u>Yes</u> No	Community ID: Wetland 18	
Is the site significantly disturbed (Atypical Situation)? Yes <u>No</u>		
Is the area a potential Problem Area? Yes <u>No</u> (If needed, explain on reverse.)		
		Data Point #: 66

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Typha angustifolia</i>	Forb	OBL	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%					
Remarks: Greater than half of the dominant species are hydrophytic. This observation satisfies the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 3 (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: (in.)	
Remarks: Indicators of wetland hydrology were observed. This observation satisfies the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-16	A	2.5Y 3/1			CL
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were observed. This observation satisfies the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	<u>Yes</u> No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	<u>Yes</u> No	<u>Yes</u> No (Circle)
Hydric Soils Present?	<u>Yes</u> No	
Remarks: The area is an excavated ditch that has established vegetation along the bed overtime. This area satisfies the three criteria and is a wetland.		

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

Project/Site: Port Columbus international Airport		Date: 8.1.2006
Applicant/Owner: Columbus Municipal Airport Authority		County: Franklin
Investigator: Landon McKinney		State: Ohio
Do Normal Circumstances exist on the site?	<u>Yes</u> No	Community ID: Non-wetland Data Point #: 67
Is the site significantly disturbed (Atypical Situation)?	Yes <u>No</u>	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <u>No</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Poa pratensis</i>	Grass	UPL	9.		
2. <i>Festuca elatior</i>	Grass	UPL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 0%					
Remarks: Less than half of the dominant species are hydrophytic. This observation does not satisfy the vegetation criterion.					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in the Upper 12 in. Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in. Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Field Observations: Depth of Surface Water: (in.) Depth to Free Water in Pit: (in.) Depth to Saturated Soil: >4 (in.)	
Remarks: Sufficient indicators of wetland hydrology were not observed. This observation does not satisfy the hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Drainage Class: Field Observations Confirm Mapped Type? Yes No		
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/ Contrast	Texture, Concretions, Structure, etc.
0-4	A	10YR 4/4			SL
4+	Impenetrable Fill				
Hydric Soil Indicators:					
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors			Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)		
Remarks: Hydric indicators were not observed. This observation does not satisfy the soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Circle)	Yes	<u>No</u>	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	Yes	<u>No</u>	Yes <u>No</u> (Circle)
Hydric Soils Present?	Yes	<u>No</u>	
Remarks: This area satisfies none of the three criteria and is not a wetland.			

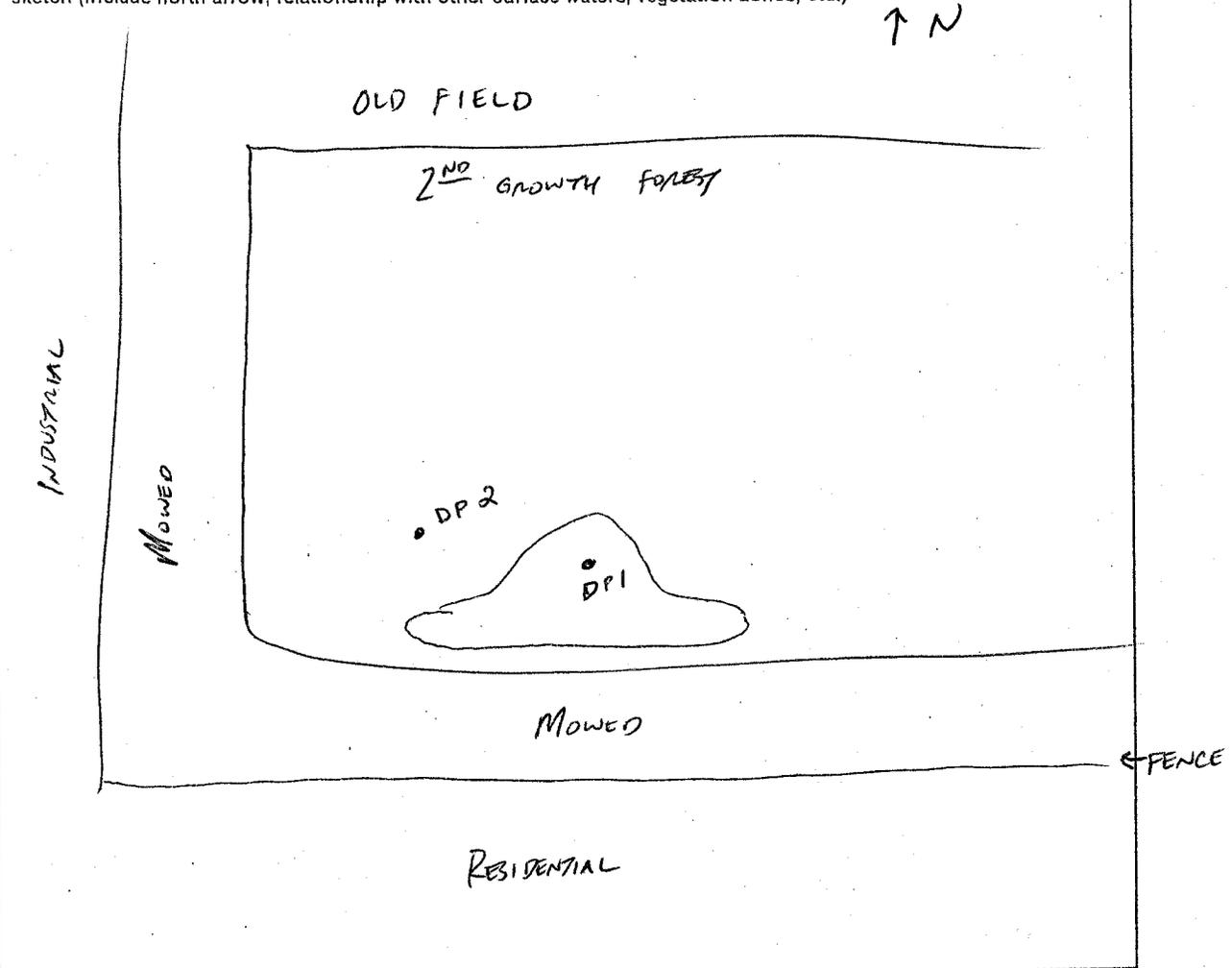
APPENDIX D: ORAM V.5.0 FORMS

Background Information

Name:	L. MCKINNEY	
Date:	8/8/06	
Affiliation:	ASC GROUP, INC.	
Address:	1016 BURLINGTON PIKE, FLORENCE, KY 41042	
Phone Number:	859-746-1967	
e-mail address:	LMCKINNEY@ASCGROUP.NET	
Name of Wetland:	WETLAND 1	
Vegetation Community(ies):	FORESTED	
HGM Class(es):	DEPRESSION	
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.		
Lat/Long or UTM Coordinate	N/A	
USGS Quad Name	N.E. COLUMBUS	
County	FRANKLIN	
Township	-	
Section and Subsection	-	
Hydrologic Unit Code	05060001-140	
Site Visit	8/8/06	
National Wetland Inventory Map	N.E. COLUMBUS	
Ohio Wetland Inventory Map	N/A	
Soil Survey	FRANKLIN	
Delineation report/map	-	
Wetland Size (acres, hectares)	0.11 AC	

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

SECOND GROWTH FORESTED WETLAND IN SECOND
GROWTH FOREST

Final score : 45

Category

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), <http://www.dnr.state.oh.us/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	<input checked="" type="radio"/> YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 1 Rater(s): L. MCKINNEY Date: 8/8/06

1 / 1

Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

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

7 / 8

Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

14 / 22

Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

13 / 35

Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

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

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

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

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

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

35

subtotal this page

Site: _____ Rater(s): _____ Date: _____

35

subtotal this page

5 40

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

5 45

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

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

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

Mudflat and Open Water Class Quality

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Microtopography Cover Scale

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

45 GRAND TOTAL(max 100 pts)

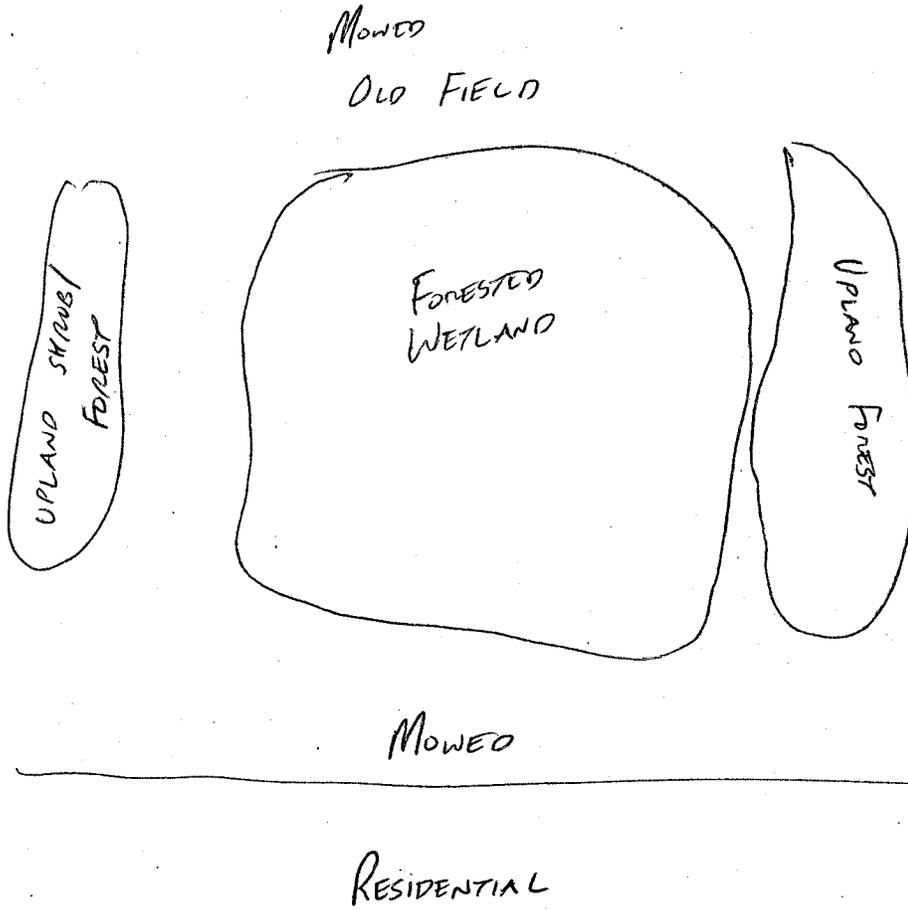
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

Name:	L. MCKINNEY		
Date:	8/8/06		
Affiliation:	ASC GROUP, INC.		
Address:	10110 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 2		
Vegetation Community(ies):	FORESTED		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.	<p>The map shows a site labeled 'W2' located near the intersection of Schnitzler Rd and 17th Ave. To the north is I-670, and to the east is I-270. The International Gateway and two Runways are also depicted. A creek, Walnut Creek, flows to the east of the site. A north arrow is drawn in the upper right quadrant of the map.</p>		
Lat/Long or UTM Coordinate	N/A		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	-		
Section and Subsection	-		
Hydrologic Unit Code	05060001-140		
Site Visit	8/8/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	-		
Wetland Size (acres, hectares)	0.84 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

FORESTED WETLAND WITH ACER SACCHARINUM, FRAXINUS PENNSYLVANICA, QUERCUS PALUSTRIS, SECOND GROWTH.

Final score: 48

Category

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), <http://www.dnr.state.oh.us/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	<input checked="" type="radio"/> YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 2 Rater(s): L. MCKINNEY Date: 8/8/06

2 2

Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

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

7 9

Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

14 23

Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

14 37

Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

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

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

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

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

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

37

subtotal this page

Site: _____ Rater(s): _____ Date: _____

37

subtotal this page

5	42
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Metric 5. Special Wetlands.

max 10 pts. subtotal Check all that apply and score as indicated.

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

6	48
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Metric 6. Plant communities, interspersions, microtopography.

max 20 pts. subtotal 6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

6b. Horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

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

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

Mudflat and Open Water Class Quality

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Microtopography Cover Scale

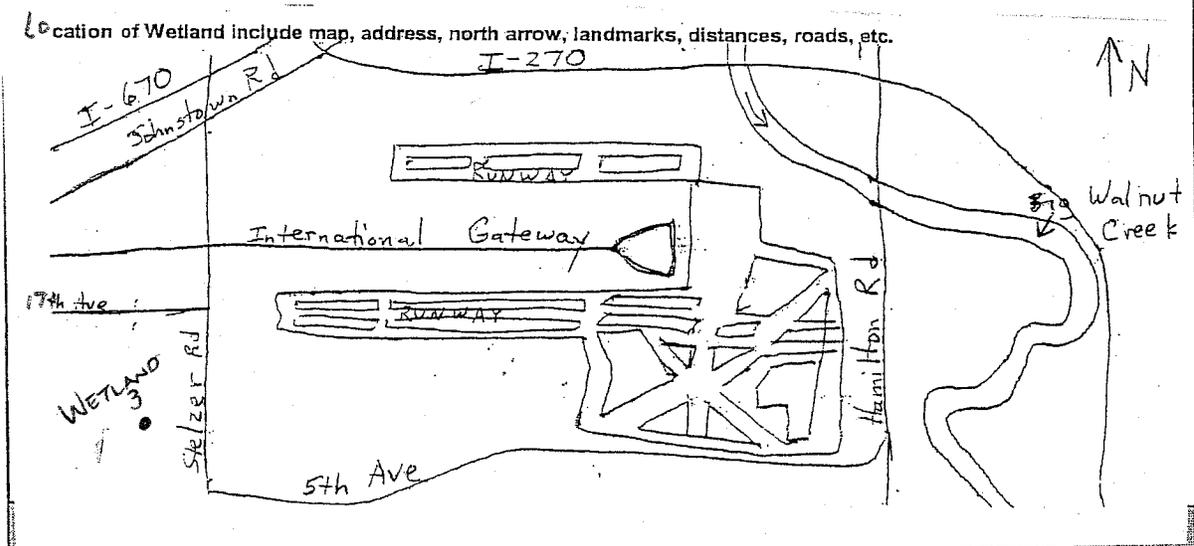
0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

48	GRAND TOTAL(max 100 pts)
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Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

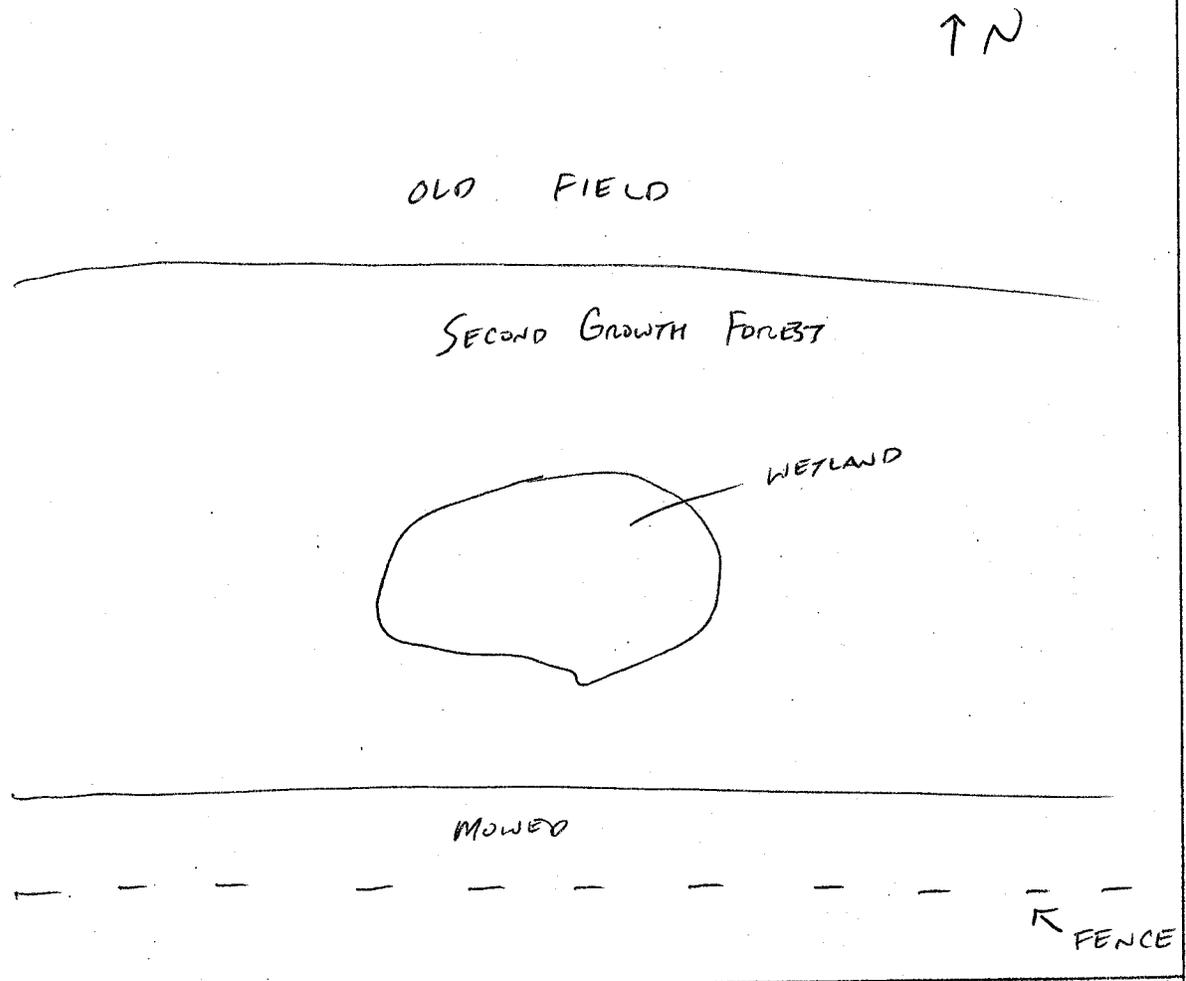
Name:	L. MCKINNEY
Date:	8/8/06
Affiliation:	ASC Group, Inc.
Address:	10116 BURLINGTON PIKE, FLORENCE, KY 41042
Phone Number:	859-746-1967
e-mail address:	LMCKINNEY@ASCGROUP.NET
Name of Wetland:	WETLAND 3
Vegetation Communit(ies):	FORESTED
HGM Class(es):	DEPRESSION



Lat/Long or UTM Coordinate	-
USGS Quad Name	N.E. COLUMBUS
County	FRANKLIN
Township	-
Section and Subsection	-
Hydrologic Unit Code	05060001-140
Site Visit	8/8/06
National Wetland Inventory Map	N.E. COLUMBUS
Ohio Wetland Inventory Map	N/A
Soil Survey	FRANKLIN
Delineation report/map	-
Wetland Size (acres, hectares)	0.06 AC

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

FORESTED WETLAND IN SECOND GROWTH FOREST

Final score : 39

Category MOD. 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), <http://www.dnr.state.oh.us/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO 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	NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES 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 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Site: WETLAND 3 Rater(s): L. MCKINNEY Date: 8/8/06

0 0

Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

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

7 7

Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

13.5 20.5

Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

11.5 32

Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

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

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

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

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

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

32

subtotal this page

Site: _____ Rater(s): _____ Date: _____

32

subtotal this page

5

37

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Praires (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)

2

39

max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. Horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

39

GRAND TOTAL(max 100 pts)

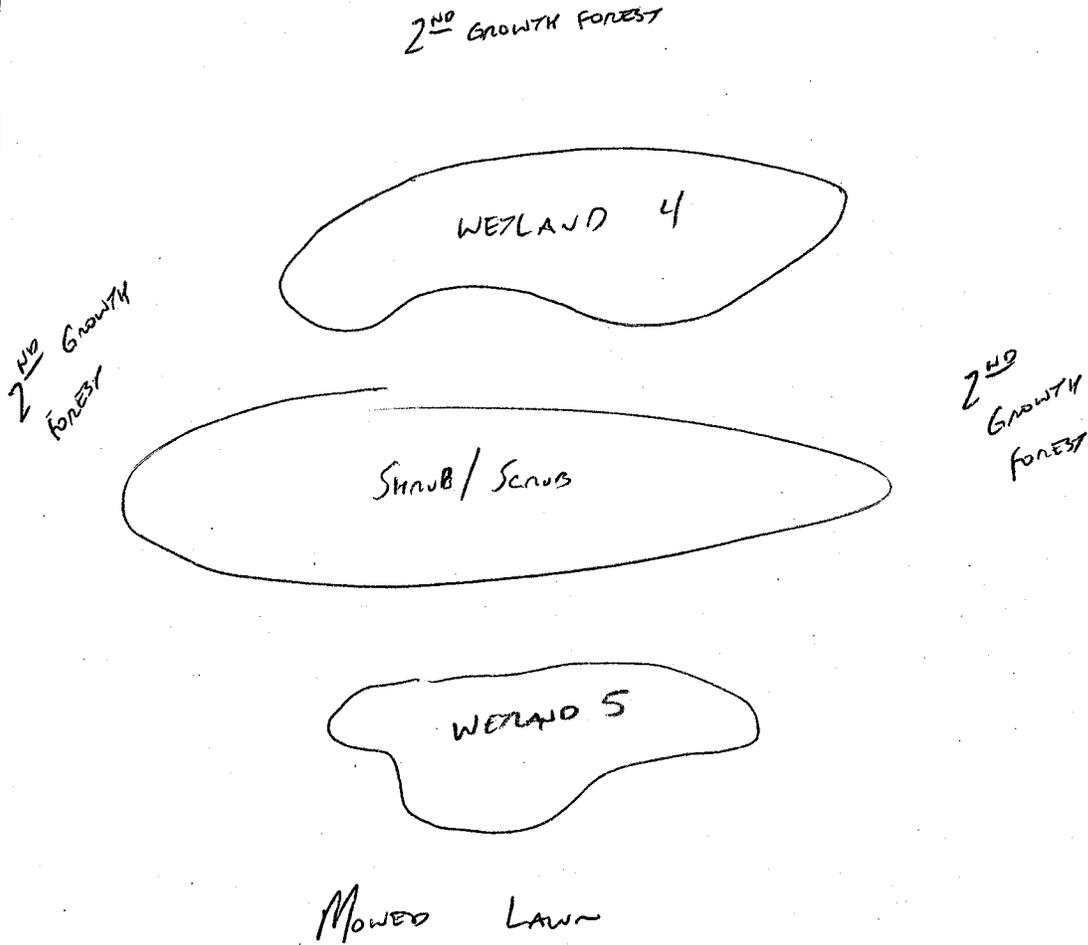
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

Name:	L. MCKINNEY		
Date:	8/8/06		
Affiliation:	ASC GROUP, INC.		
Address:	1016 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 4		
Vegetation Community(ies):	FORESTED		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	—		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	—		
Section and Subsection	—		
Hydrologic Unit Code	05060001-140		
Site Visit	8/8/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	—		
Wetland Size (acres, hectares)	0.07 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

SMALL FORESTED WETLAND IN SECOND GROWTH FOREST

Final score: 38.5

Category MOD. 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), <http://www.dnr.state.oh.us/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES 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 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the graminaceous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Site: WETLAND 4 Rater(s): L. MCKINNEY Date: 8/8/06

0 0

Metric 1. Wetland Area (size).

- max 6 pts. subtotal Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

8 8

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16 24

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)

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

11.5 35.5

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

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

35.5
subtotal this page

Site: _____ Rater(s): _____ Date: _____

35.5
subtotal this page

0 35.5
max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Praires (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)

3 38.5
max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

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

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

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

6b. horizontal (plan view) Interspersion.
Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

Narrative Description of Vegetation Quality	
low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

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

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

Mudflat and Open Water Class Quality	
0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

6d. Microtopography.
Score all present using 0 to 3 scale.

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

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

38.5 GRAND TOTAL(max 100 pts)

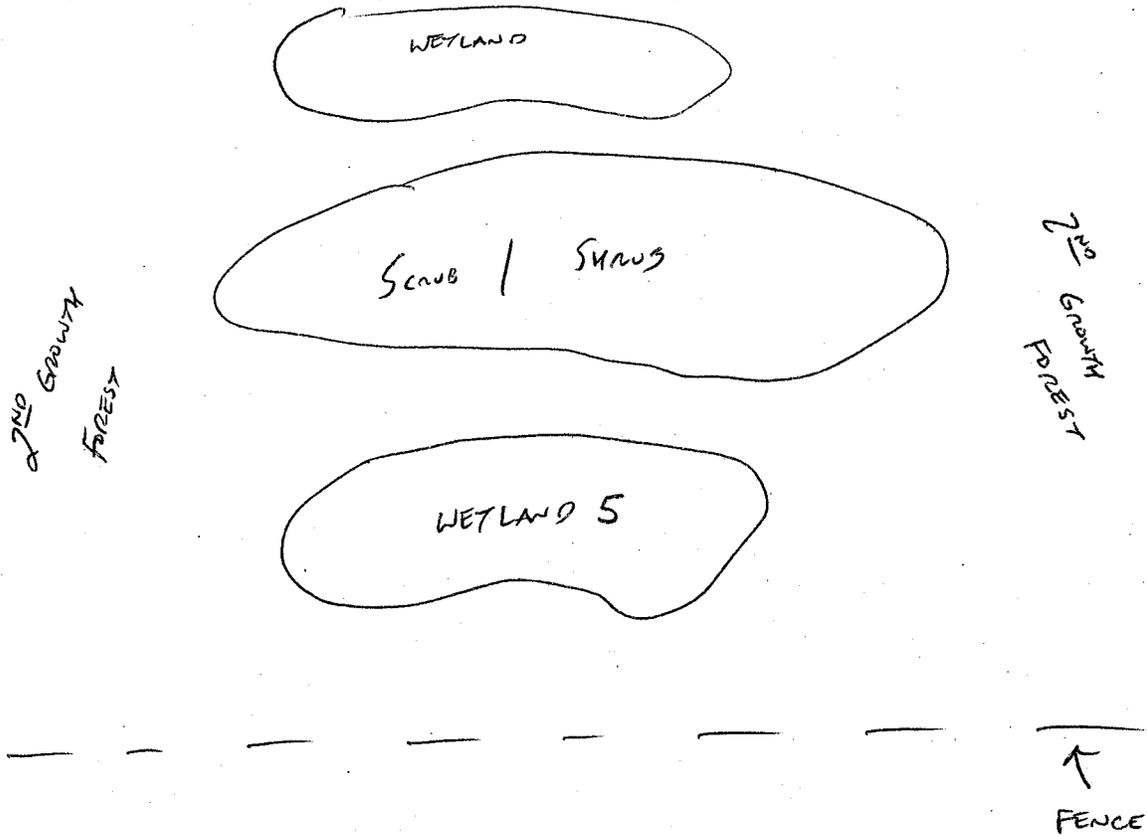
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

Name:	L. MCKINNEY		
Date:	8/8/06		
Affiliation:	ASC GROUP, INC.		
Address:	1010 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 5		
Vegetation Community(ies):	FORESTED		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	—		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	—		
Section and Subsection	—		
Hydrologic Unit Code	05060001-140		
Site Visit	8/8/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	—		
Wetland Size (acres, hectares)	0.05 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

SMALL FORESTED WETLAND IN SECOND GROWTH FOREST

Final score: 38.5

Category

MDD. 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), <http://www.dnr.state.oh.us/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	<input checked="" type="radio"/> NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	<input type="radio"/> NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	<input type="radio"/> NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	<input type="radio"/> NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	<input type="radio"/> NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 5 Rater(s): L. MCKINNEY Date: 8/8/06

0 0 Metric 1. Wetland Area (size).

- max 6 pts. subtotal Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

8 8 Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16 24 Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)

Check all disturbances observed

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

11.5 35.5 Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

Check all disturbances observed

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

35.5
subtotal this page

Site: _____ Rater(s): _____ Date: _____

35.5

subtotal this page

0 35.5

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

3 38.5

max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

38.5 GRAND TOTAL(max 100 pts)

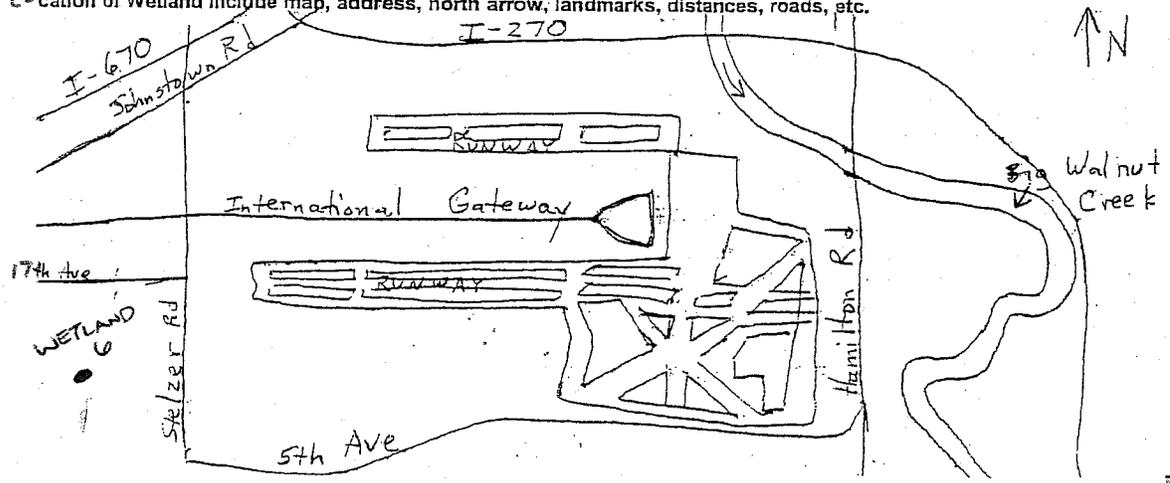
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

Name:	L. MCKINNEY
Date:	8/8/06
Affiliation:	ASC GROUP, INC.
Address:	10110 BURLINGTON PIKE, FLORENCE, KY 41042
Phone Number:	859-746-1967
e-mail address:	LMCKINNEY@ASCGROUP.NET

Name of Wetland:	WETLAND 6
Vegetation Community(ies):	FORESTED
HGM Class(es):	DEPRESSION

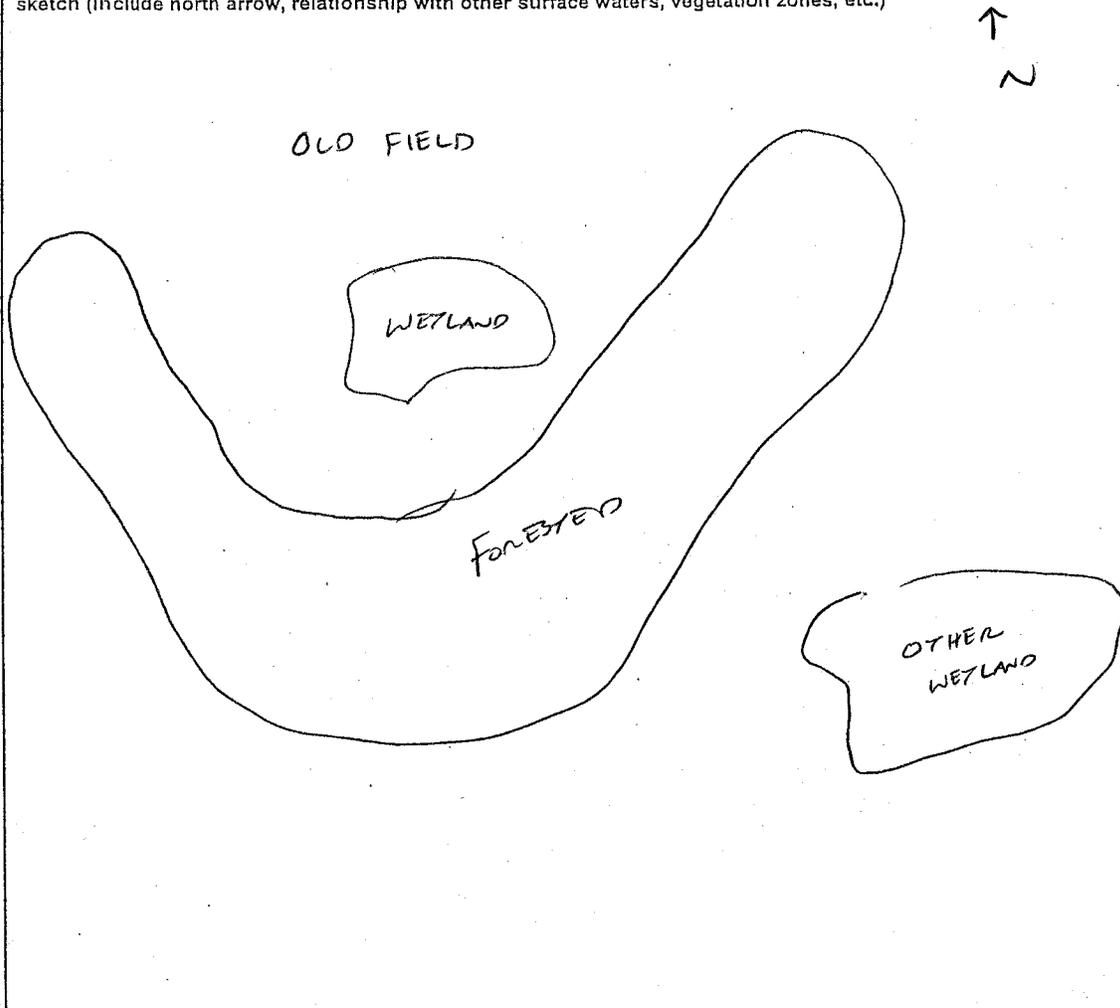
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.



Lat/Long or UTM Coordinate	—
USGS Quad Name	N.E. COLUMBUS
County	FRANKLIN
Township	—
Section and Subsection	—
Hydrologic Unit Code	05060001-140
Site Visit	8/8/06
National Wetland Inventory Map	N.E. COLUMBUS
Ohio Wetland Inventory Map	N/A
Soil Survey	FRANKLIN
Delineation report/map	—
Wetland Size (acres, hectares)	0.03ac

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

SILVER MAPLE WETLAND WITH SMALL HUMMOCKS
TOPPED WITH LIVE SPHAGNUM; NO PEAT, ONLY
DIRT IN HUMMOCKS

Final score : 41

Category Moo. 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), <http://www.dnr.state.oh.us/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	<input checked="" type="radio"/> NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 6 Rater(s): L. MCKINNEY Date: 8/8/06

0 0

Metric 1. Wetland Area (size).

- max 6 pts. subtotal Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

9 9

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

14 23

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)
- Check all disturbances observed

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

14 37

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)
- Check all disturbances observed

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

37
subtotal this page

Site: _____ Rater(s): _____ Date: _____

37

subtotal this page

- 37

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

4 41

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

41 GRAND TOTAL(max 100 pts)

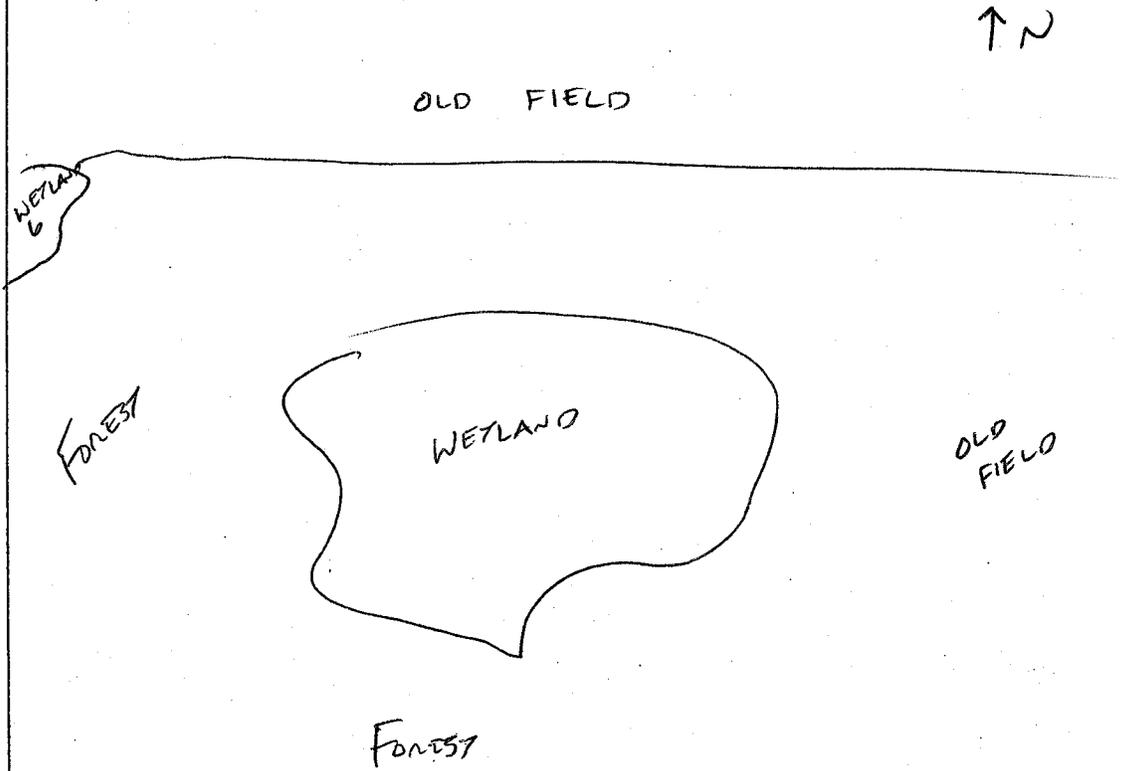
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

Name:	L. MCKINNEY		
Date:	8/8/06		
Affiliation:	ASC GROUP, INC.		
Address:	10116 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 7		
Vegetation Community(ies):	FORESTED		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.	<p>The map shows a hand-drawn layout of an airport area. At the top, I-670 and I-270 are indicated. Schinstown Rd runs diagonally from the top left. The International Gateway is a large rectangular structure in the center. Below it is a Runway. To the left of the Runway is 17th Ave, and below that is 5th Ave. To the right of the Runway is Hamilton Rd. Walnut Creek is shown on the right side of the map. A north arrow is in the top right corner. A small circle labeled 'W7' is marked near 17th Ave and Schinstown Rd.</p>		
Lat/Long or UTM Coordinate	—		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	—		
Section and Subsection	—		
Hydrologic Unit Code	05060001-140		
Site Visit	8/8/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	—		
Wetland Size (acres, hectares)	0.14 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

SILVER MAPLE WETLAND WITH SMALL HUMMOCKS
TOPPED WITH LIVE SPHAGNUM. NO PEAT, ONLY
DIRT IN HUMMOCKS.

Final score : 42

Category

MOO. 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), <http://www.dnr.state.oh.us/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	<input checked="" type="radio"/> NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 7 Rater(s): L. MCKINNEY Date: 8/8/06

1 1

Metric 1. Wetland Area (size).

- max 6 pts. subtotal Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

9 10

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

14 24

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)

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

14 38

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

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

38
subtotal this page

Site: _____ Rater(s): _____ Date: _____

38

subtotal this page

0	38
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max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

4	42
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max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

42

GRAND TOTAL(max 100 pts)

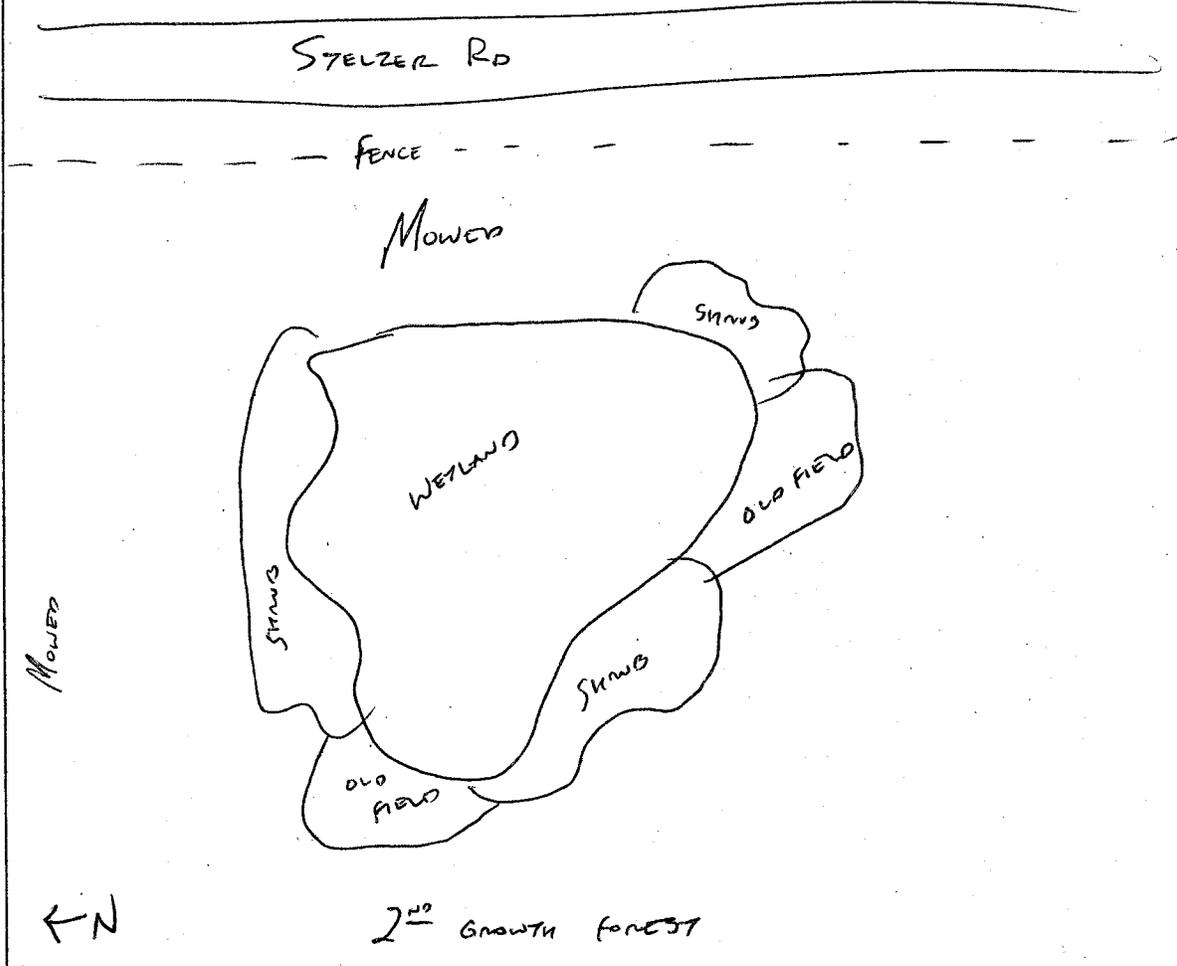
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

Name:	L. MCKINNEY		
Date:	8/8/06		
Affiliation:	ASC GROUP, INC.		
Address:	1016 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 8		
Vegetation Community(ies):	FORESTED		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	_____		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	_____		
Section and Subsection	_____		
Hydrologic Unit Code	05060001-140		
Site Visit	8/8/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	_____		
Wetland Size (acres, hectares)	0.39 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

SECOND GROWTH FORESTED WETLAND DOMINATED BY PIN OAK

Final score : 49

Category

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), <http://www.dnr.state.oh.us/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	<input checked="" type="radio"/> YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 8 Rater(s): L. MCKINNEY Date: 8/8/06

2 2

Metric 1. Wetland Area (size).

- max 6 pts. subtotal Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

7 9

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

17 26

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)

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

13 39

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

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

39
subtotal this page

Site: _____ Rater(s): _____ Date: _____

39

subtotal this page

X 44

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

5 49

max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

49 GRAND TOTAL(max 100 pts)

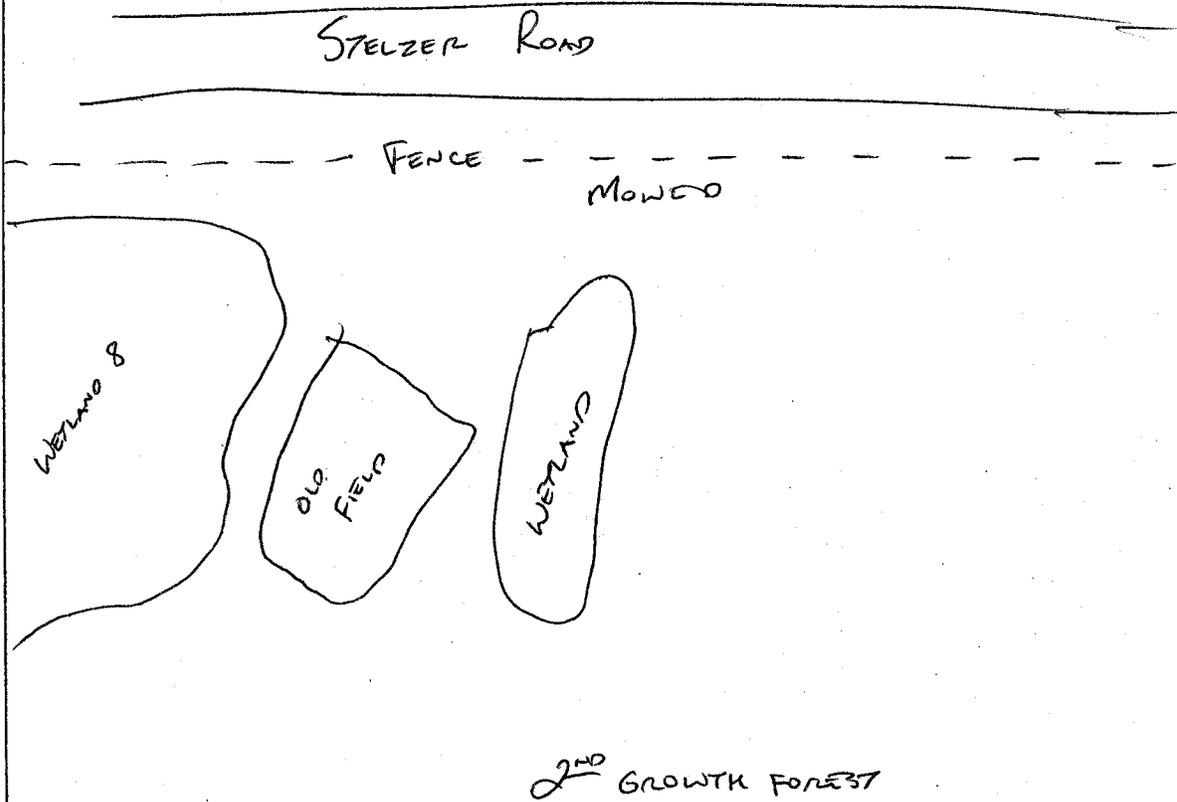
Background Information

Name:	L. MCKINNEY	
Date:	8/8/06	
Affiliation:	ASC GROUP, INC.	
Address:	10116 BURLINGTON PIKE, FLORENCE, KY 41042	
Phone Number:	859-746-1967	
e-mail address:	LMCKINNEY@ASCGROUP.NET	
Name of Wetland:	WETLAND 9	
Vegetation Community(ies):	FORESTED	
HGM Class(es):	DEPRESSION	
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.		
Lat/Long or UTM Coordinate	_____	
USGS Quad Name	N.E. COLUMBUS	
County	FRANKLIN	
Township	_____	
Section and Subsection	_____	
Hydrologic Unit Code	05060001-140	
Site Visit	8/8/06	
National Wetland Inventory Map	N.E. COLUMBUS	
Ohio Wetland Inventory Map	N/A	
Soil Survey	FRANKLIN	
Delineation report/map	_____	
Wetland Size (acres, hectares)	0.05 AC	

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)

FN



Comments, Narrative Discussion, Justification of Category Changes

SECOND GROWTH FORESTED WETLAND DOMINATED BY PIN OAK

Final score : 47

Category

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), <http://www.dnr.state.oh.us/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES 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 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Site: WETLAND 9 Rater(s): L. MCKINNEY Date: 8/8/06

0 0

Metric 1. Wetland Area (size).

- max 6 pts. subtotal Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

7 7

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

17 24

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)

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

13 37

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

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

37

subtotal this page

Site: _____ Rater(s): _____ Date: _____

37

subtotal this page

5

42

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

5

47

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

Quality	Description
low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

47

GRAND TOTAL(max 100 pts)

Background Information

Name:	L. MCKINNEY		
Date:	8/8/06		
Affiliation:	ASC GROUP, INC.		
Address:	10110 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 10		
Vegetation Community(ies):	FORESTED		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.	<p>The map shows a site bounded by I-670 to the northwest, I-270 to the north, and Hamilton Rd to the east. To the west are 17th Ave and 5th Ave. A runway is located within the site. Walnut Creek is shown to the east of the site. A north arrow is in the upper right corner.</p>		
Lat/Long or UTM Coordinate	_____		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	_____		
Section and Subsection	_____		
Hydrologic Unit Code	05060001-140		
Site Visit	8/8/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	NA		
Soil Survey	FRANKLIN		
Delineation report/map	_____		
Wetland Size (acres, hectares)	0.21 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

SECOND GROWTH FORESTED WETLAND DOMINATED BY PIN OAK

Final score : 48

Category

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), <http://www.dnr.state.oh.us/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO 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	NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: oversory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	<input checked="" type="radio"/> YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 10 Rater(s): L. MCKWNEY Date: 8/8/06

1 1

Metric 1. Wetland Area (size).

- max 6 pts. subtotal Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

7 8

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

17 25

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)

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

13 38

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

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

38
subtotal this page

Site: _____ Rater(s): _____ Date: _____

38

subtotal this page

5 43

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

5 48

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

Quality	Description
low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

48

GRAND TOTAL(max 100 pts)

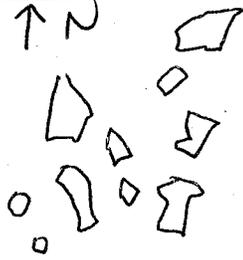
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

Name:	L. MCKINNEY		
Date:	8/8/06		
Affiliation:	ASC GROUP, INC.		
Address:	10116 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 11 A-11Z		
Vegetation Community(ies):	EMERGENT		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	_____		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	_____		
Section and Subsection	_____		
Hydrologic Unit Code	05060001-140		
Site Visit	8/8/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	_____		
Wetland Size (acres, hectares)	6.19 AC.		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

WETLAND COMPLEX OF EMERGENT IN MOWED/
OLD FIELD AREA.

Final score : 27.5

Category

1

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/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	<input checked="" type="radio"/> NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 11A - 11Z Rater(s): L. MCKWNEY Date: 8/8/06

3 3

Metric 1. Wetland Area (size).

max 6 pts. subtotal Select one size class and assign score.

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

2 5

Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal 2a. Calculate average buffer width. Select only one and assign score. Do not double check.

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

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

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

15.5 20.5

Metric 3. Hydrology.

max 30 pts. subtotal 3a. Sources of Water. Score all that apply.

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

Check all disturbances observed

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

5 25.5

Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal 4a. Substrate disturbance. Score one or double check and average.

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

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

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

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

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

Check all disturbances observed

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

25.5

subtotal this page

Site: _____ Rater(s): _____ Date: _____

25.5

subtotal this page

0 25.5

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Praires (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)

2 27.5

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

27.5 GRAND TOTAL(max 100 pts)

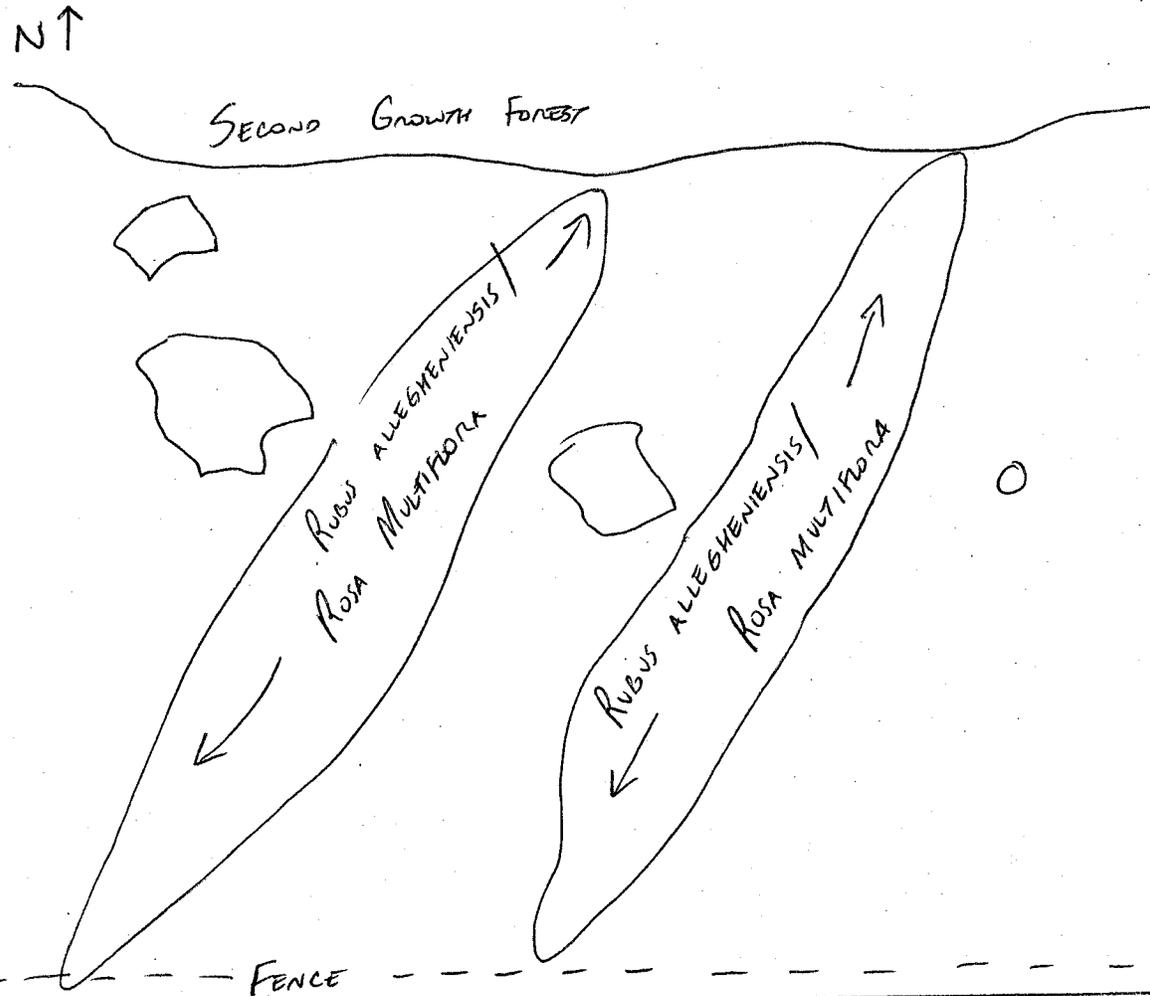
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

Name:	L. MCKINNEY		
Date:	8/8/06		
Affiliation:	ASC GROUP, INC.		
Address:	10110 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 12A-120		
Vegetation Community(ies):	EMERGENT		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	_____		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	_____		
Section and Subsection	_____		
Hydrologic Unit Code	05060001-140		
Site Visit	8/8/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	_____		
Wetland Size (acres, hectares)	0.079 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

SMALL EMERGENT DEPRESSIONAL AREAS DOMINATED BY
JUNCUS EFFUSUS AND SCIRPUS CYPERINUS

Final score :	15.5	Category	1
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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), <http://www.dnr.state.oh.us/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	<input checked="" type="radio"/> NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 12A-120 Rater(s): L. MCKINNEY Date: 8/8/06

0 0

Metric 1. Wetland Area (size).

- max 6 pts. subtotal Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

4 4

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

6.5 10.5

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)

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

3 13.5

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

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

13.5
subtotal this page

Site: _____ Rater(s): _____ Date: _____

13.5

subtotal this page

0 13.5

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Praires (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)

2 15.5

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- 0 Aquatic bed
- 1 Emergent
- 0 Shrub
- 0 Forest
- 0 Mudflats
- 0 Open water
- 0 Other _____

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

15.5 GRAND TOTAL(max 100 pts)

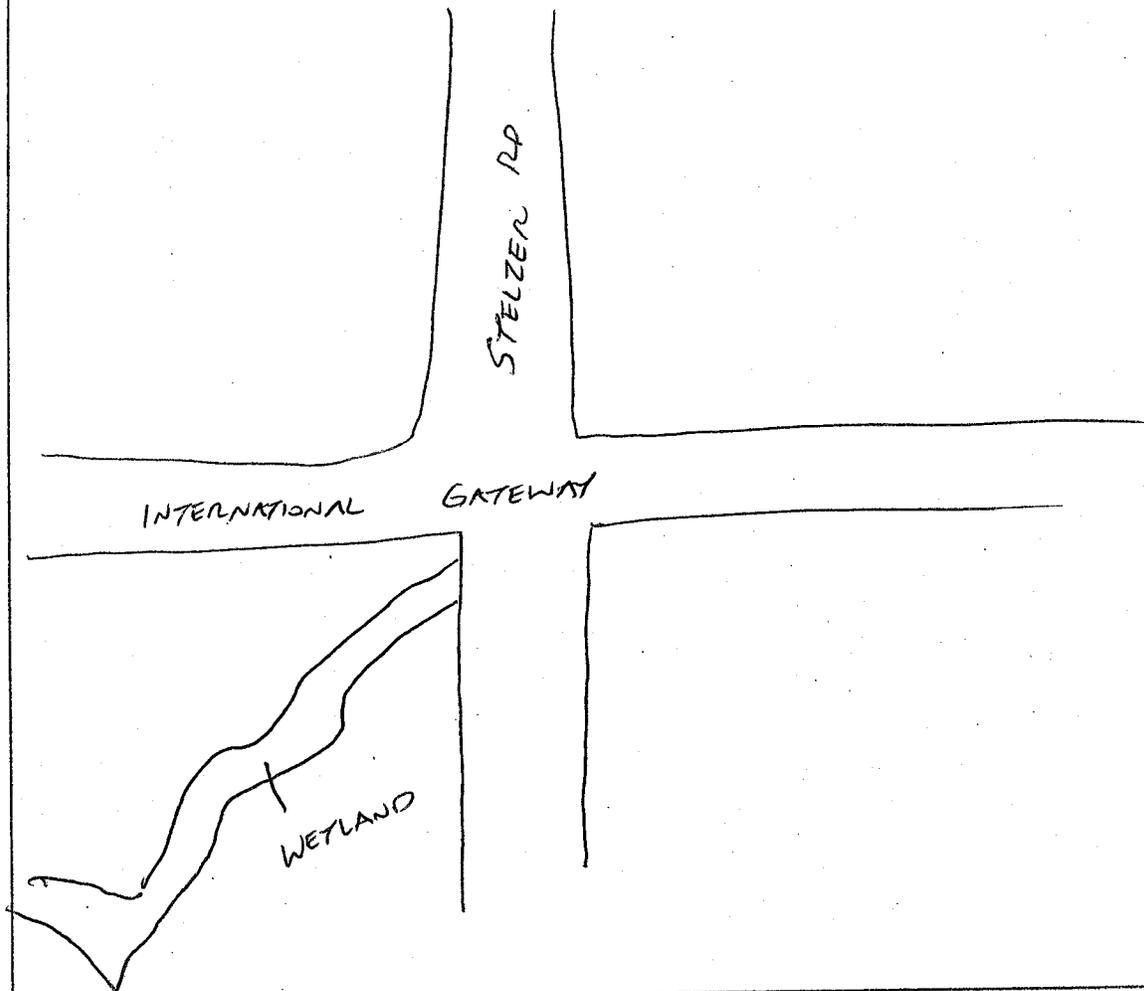
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

Name:	L. MCKINNEY		
Date:	8/8/06		
Affiliation:	ASC GROUP, INC.		
Address:	10116 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	W 13		
Vegetation Community(ies):	EMERGENT		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	_____		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	_____		
Section and Subsection	_____		
Hydrologic Unit Code	05060001-140		
Site Visit	8/8/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	_____		
Wetland Size (acres, hectares)	0.21 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

VEGETATIVE (CATTAILS) SWALE

Final score : 18.5

Category

1

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/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	<input checked="" type="radio"/> NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 13 Rater(s): L. MCKINNEY Date: 8/8/06

1 | 1

Metric 1. Wetland Area (size).

- max 6 pts. subtotal Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

3 | 4

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

9.5 | 13.5

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)
- Check all disturbances observed

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

6 | 19.5

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)
- Check all disturbances observed

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

19.5

subtotal this page

Site: _____ Rater(s): _____ Date: _____

19.5

subtotal this page

0 19.5

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-1 18.5

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

18.5 GRAND TOTAL(max 100 pts)

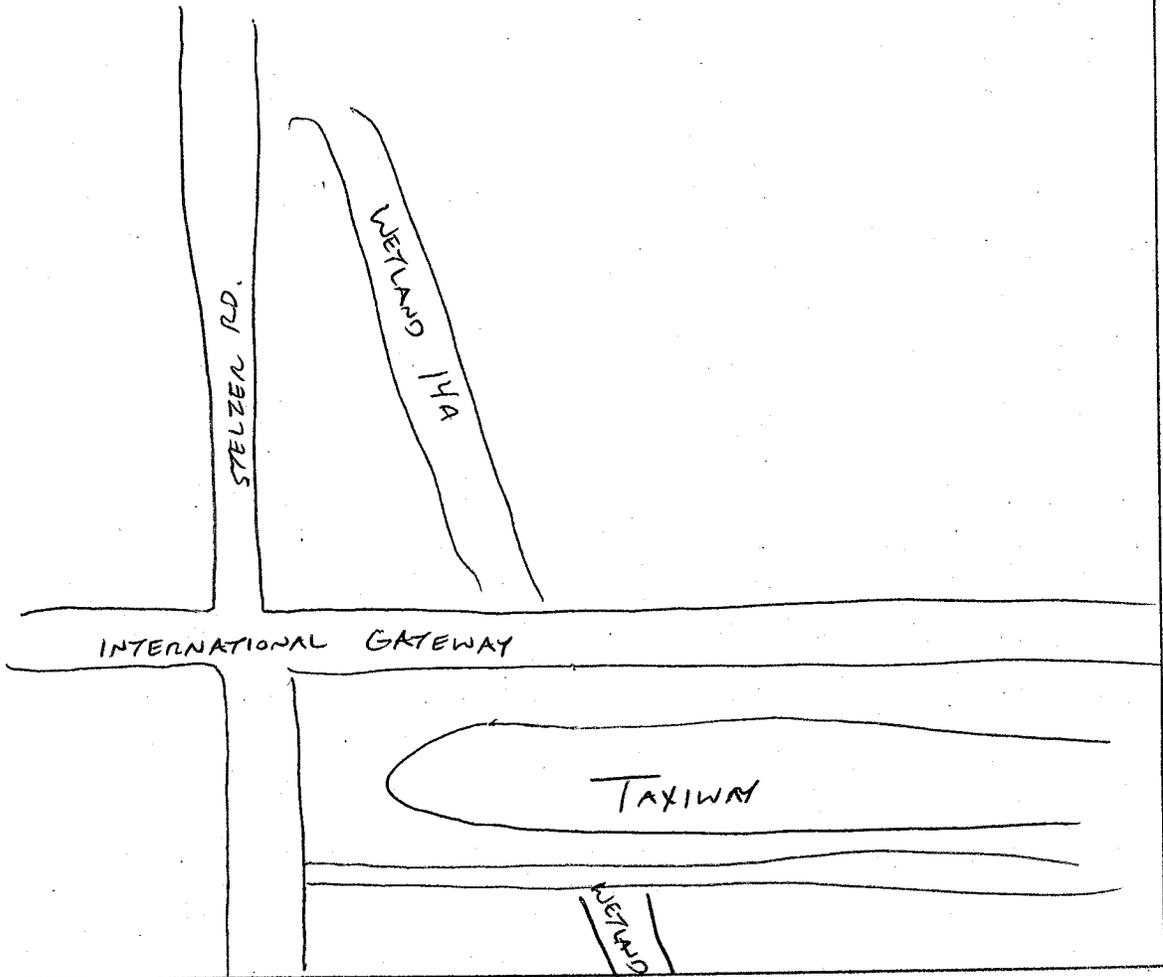
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

Name:	L. MCKINNEY		
Date:	8/1/06		
Affiliation:	ASC GROUP, INC.		
Address:	1016 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 14 A-14B		
Vegetation Community(ies):	EMERGENT		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	_____		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	_____		
Section and Subsection	_____		
Hydrologic Unit Code	05060001-140		
Site Visit	8/1/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	_____		
Wetland Size (acres, hectares)	0.42 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes ^{1/5}

VEGETATIVE (CUTTAIL) SWALE

Final score : 19.5

Category

1

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/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	<input checked="" type="radio"/> NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: Wetland 14A & 14B Rater(s): L. McKinney Date: 8/1/06

2 2

Metric 1. Wetland Area (size).

- max 6 pts. subtotal
- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

3 5

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

9.5 14.5

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- | | |
|---|---|
| Check all disturbances observed | |
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> other _____ |
- 3f. None or none apparent (12)
- Recovered (7)
- Recovering (3)
- Recent or no recovery (1)

6 20.5

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- | | |
|---|---|
| Check all disturbances observed | |
| <input checked="" type="checkbox"/> mowing | <input type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation |
| <input type="checkbox"/> selective cutting | <input checked="" type="checkbox"/> dredging |
| <input type="checkbox"/> woody debris removal | <input type="checkbox"/> farming |
| <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |
- None or none apparent (9)
- Recovered (6)
- Recovering (3)
- Recent or no recovery (1)

20.5

subtotal this page

Site: _____ Rater(s): _____ Date: _____

20.5

subtotal this page

0 20.5

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-1 19.5

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

19.5 GRAND TOTAL(max 100 pts)

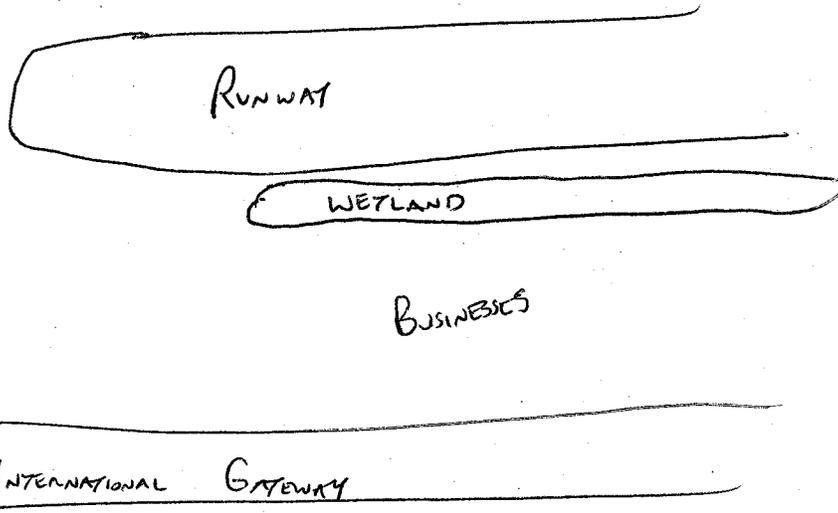
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

Name:	L. MCKINNEY		
Date:	8/1/06		
Affiliation:	ASC GROUP, INC.		
Address:	10116 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 15a-15e		
Vegetation Communit(ies):	EMERGENT		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	_____		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	_____		
Section and Subsection	_____		
Hydrologic Unit Code	05060001-140		
Site Visit	8/1/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	_____		
Wetland Size (acres, hectares)	1.05 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

VEGETATIVE (CATTAILS) SWALE

Final score : 18.5

Category

1

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/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	<input checked="" type="radio"/> NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 15a-15e Rater(s): L. MCKINNEY Date: 8/1/06

1 1

Metric 1. Wetland Area (size).

- max 6 pts. subtotal Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

3 4

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

9.5 13.5

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)

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

6 19.5

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

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

19.5
subtotal this page

Site: _____ Rater(s): _____ Date: _____

19.5
subtotal this page

0 19.5
max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-1 18.5
max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- 0 Aquatic bed
- 1 Emergent
- 0 Shrub
- 0 Forest
- 0 Mudflats
- 0 Open water
- 0 Other _____

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

18.5 GRAND TOTAL(max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

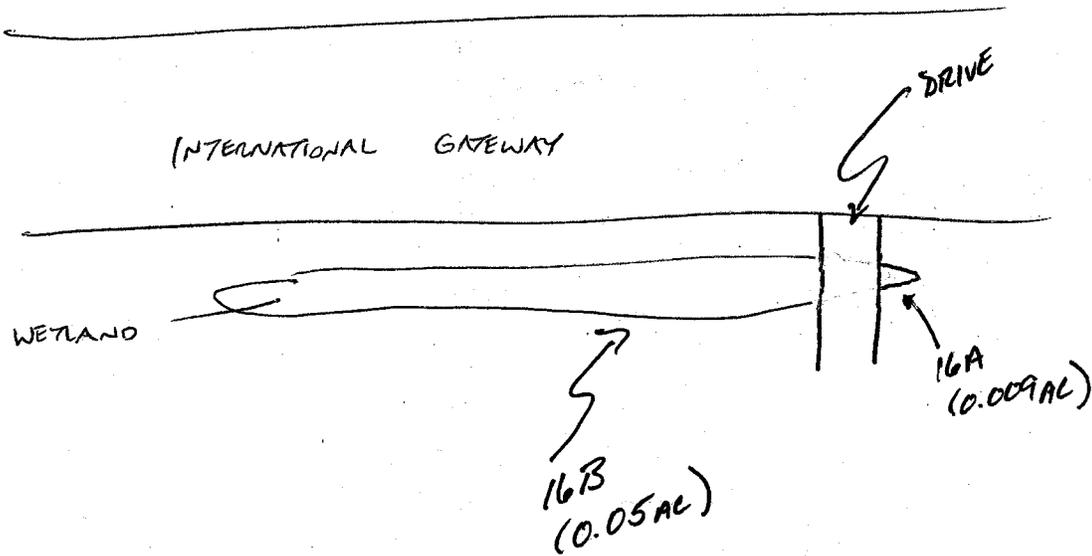
Background Information

Name:	L. MCKINNEY		
Date:	8/1/06		
Affiliation:	ASC GROUP, INC.		
Address:	1010 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 16A-16B		
Vegetation Community(ies):	EMERGENT		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	_____		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	_____		
Section and Subsection	_____		
Hydrologic Unit Code	05060001-140		
Site Visit	8/1/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	_____		
Wetland Size (acres, hectares)	0.059 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)

↑
N



Comments, Narrative Discussion, Justification of Category Changes

VEGETATIVE (CATTAIL) SWALE

Final score : 17.5

Category

1

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/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO 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	NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	<input checked="" type="radio"/> NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 16A-16B Rater(s): L. MCKINNEY Date: 8/1/06

0 0

Metric 1. Wetland Area (size).

- max 6 pts. subtotal Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

3 3

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

9.5 12.5

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)
- Check all disturbances observed

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

6 18.5

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)
- Check all disturbances observed

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

18.5

subtotal this page

Site: _____ Rater(s): _____ Date: _____

18.5
subtotal this page

0 18.5
max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-1 17.5
max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

17.5 GRAND TOTAL(max 100 pts)

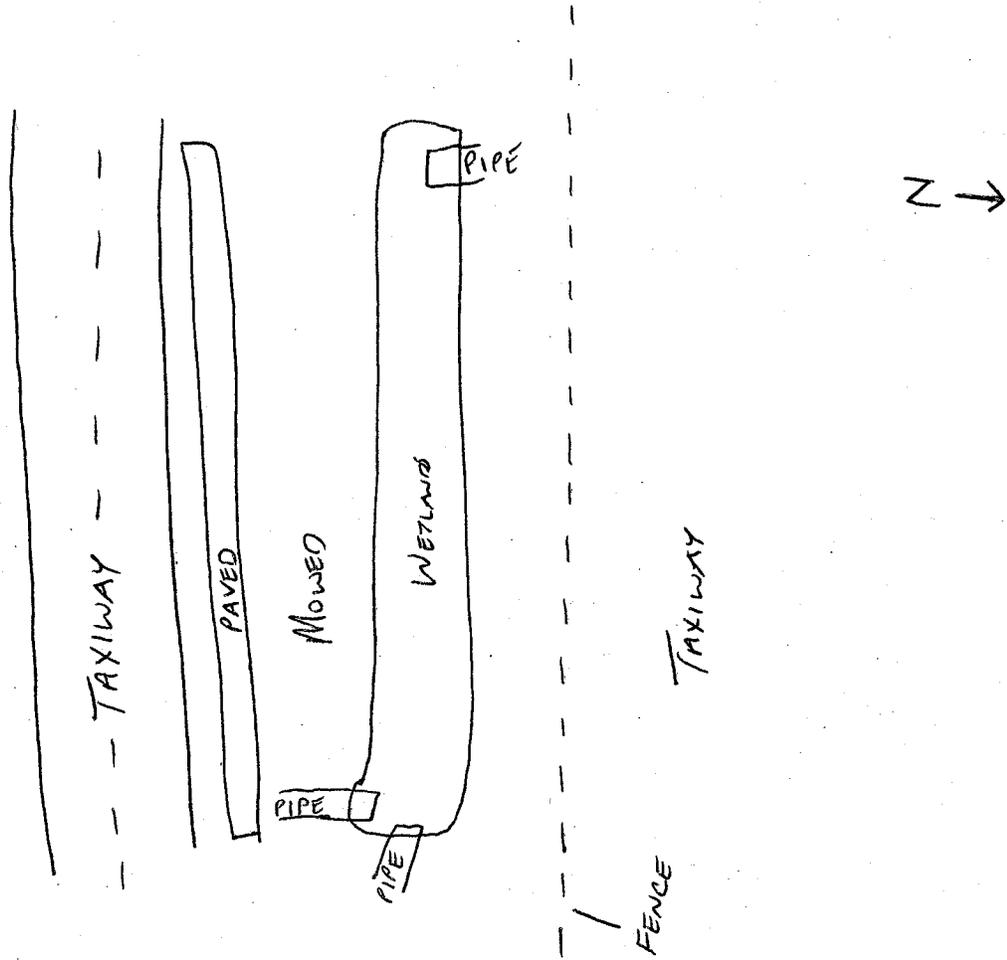
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Background Information

Name:	L. MCKINNEY		
Date:	8/1/06		
Affiliation:	ASC GROUP, INC.		
Address:	1016 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 17A - 17i		
Vegetation Community(ies):	EMERGENT		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	_____		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	_____		
Section and Subsection	_____		
Hydrologic Unit Code	05060001-140		
Site Visit	8/1/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	_____		
Wetland Size (acres, hectares)	0.60 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

VEGETATIVE SWALE ADJACENT TO TAXIWAY

Final score : 20

Category

1

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/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	<input checked="" type="radio"/> NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<input checked="" type="radio"/> NO 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<input checked="" type="radio"/> NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<input checked="" type="radio"/> NO Complete Quantitative Rating

Site: WETLAND 17a - 17i Rater(s): L. McKINNEY Date: 8/1/06

2 2

Metric 1. Wetland Area (size).

- max 6 pts. subtotal Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

1 3

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

8.5 11.5

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)

Check all disturbances observed

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

5.5 17

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

Check all disturbances observed

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

17
subtotal this page

Site: _____ Rater(s): _____ Date: _____

17

subtotal this page

0

17

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

3

20

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- 0 Aquatic bed
- 1 Emergent
- 0 Shrub
- 0 Forest
- 0 Mudflats
- 0 Open water
- 0 Other _____

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

Quality	Description
low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

20

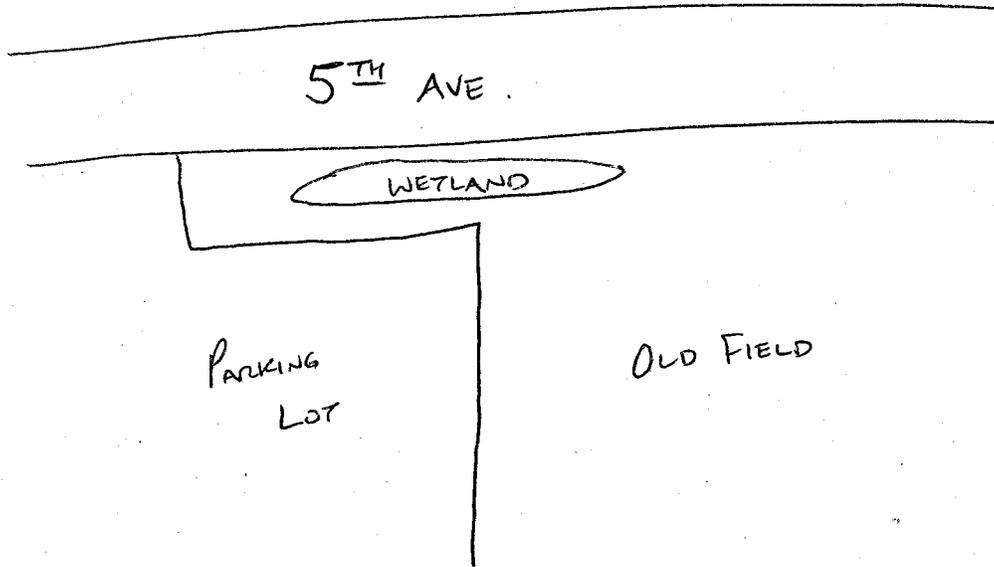
GRAND TOTAL(max 100 pts)

Background Information

Name:	L. MCKINNEY		
Date:	8/1/06		
Affiliation:	ASC GROUP, INC.		
Address:	10110 BURLINGTON PIKE, FLORENCE, KY 41042		
Phone Number:	859-746-1967		
e-mail address:	LMCKINNEY@ASCGROUP.NET		
Name of Wetland:	WETLAND 18		
Vegetation Community(ies):	EMERGENT		
HGM Class(es):	DEPRESSION		
Location of Wetland include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	_____		
USGS Quad Name	N.E. COLUMBUS		
County	FRANKLIN		
Township	_____		
Section and Subsection	_____		
Hydrologic Unit Code	05060001-140		
Site Visit	8/1/06		
National Wetland Inventory Map	N.E. COLUMBUS		
Ohio Wetland Inventory Map	N/A		
Soil Survey	FRANKLIN		
Delineation report/map	_____		
Wetland Size (acres, hectares)	0.01 AC		

Name:

sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)



Comments, Narrative Discussion, Justification of Category Changes

VEGETATIVE (CATTAIL) SWALE

Final score : 10

Category

1

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/odnr/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 a 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 Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> 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 Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a

#	Question	Circle one	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	NO Go to Question 8b
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES 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 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 Go to Question 9d	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Site: WETLAND 18 Rater(s): L. MCKINNEY Date: 8/1/06

0 0

Metric 1. Wetland Area (size).

- max 6 pts. subtotal
- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

2 2

Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

8 10

Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)
- Check all disturbances observed

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

4 14

Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)
- Check all disturbances observed

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

14

subtotal this page

Site: _____ Rater(s): _____ Date: _____

14
subtotal this page

max 10 pts. subtotal

0	14
---	----

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

max 20 pts. subtotal

-4	10
----	----

Metric 6. Plant communities, interspersions, microtopography.

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

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

6b. horizontal (plan view) Interspersion.
Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

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

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

6d. Microtopography.
Score all present using 0 to 3 scale.

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

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

Narrative Description of Vegetation Quality	
low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality	
0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

10 GRAND TOTAL(max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

APPENDIX E: HHEI AND QHEI DATA FORMS



Qualitative Habitat Evaluation Index Field Sheet QHEI Score: **51.5**

River Code: 30547 RM: _____ Stream: BIG WALNUT CREEK (STREAM #1)
 Date: 8/28/06 Location: NEAR INTERSECTION OF RT. 317 AND SAWYER RD.
 Scorers Full Name: R. PAUL Affiliation: ASE Group, Inc

1) SUBSTRATE (Check ONLY Two Substrate TYPE BOXES; Estimate % present)

TYPE		POOL RIFFLE	POOL RIFFLE	SUBSTRATE ORIGIN	SUBSTRATE QUALITY	
<input type="checkbox"/> -BLDR/SLBS [10]	<input type="checkbox"/> -GRAVEL [7]	<u>15</u>	Check ONE (OR 2 & AVERAGE)	<input type="checkbox"/> -LIMESTONE [1]	SILT:	<input type="checkbox"/> -SILT HEAVY [-2]
<input type="checkbox"/> -BOULDER [9]	<input type="checkbox"/> -SAND [6]			<input checked="" type="checkbox"/> -TILLS [1]	<input checked="" type="checkbox"/> -SILT MODERATE [-1]	Substrate 4 Max 20
<input type="checkbox"/> -COBBLE [8]	<input type="checkbox"/> -BEDROCK [5]			<input type="checkbox"/> -WETLANDS [0]	<input type="checkbox"/> -SILT NORMAL [0]	
<input type="checkbox"/> -HARDPAN [4]	<input checked="" type="checkbox"/> -DETRITUS [3]	<u>25</u>		<input type="checkbox"/> -HARDPAN [0]	<input type="checkbox"/> -SILT FREE [1]	
<input type="checkbox"/> -MUCK [2]	<input type="checkbox"/> -ARTIFICIAL [0]			<input type="checkbox"/> -SANDSTONE [0]	<input type="checkbox"/> -EXTENSIVE [-2]	
<input checked="" type="checkbox"/> -SILT [2]	<u>60</u>			<input type="checkbox"/> -RIP/RAP [0]	NESS:	<input checked="" type="checkbox"/> -MODERATE [-1]
NUMBER OF SUBSTRATE TYPES: <input type="checkbox"/> 4 or More [2]				<input type="checkbox"/> -LACUSTRINE [0]		<input type="checkbox"/> -NORMAL [0]
(High Quality Only, Score 5 or >) <input checked="" type="checkbox"/> 3 or Less [0]				<input type="checkbox"/> -SHALE [-1]		<input type="checkbox"/> -NONE [1]
COMMENTS				<input type="checkbox"/> -COAL FINES [-2]		

2) INSTREAM COVER (Give each cover type a score of 0 to 3; see back for instructions)

TYPE: Score All That Occur		AMOUNT: (Check ONLY One or check 2 and AVERAGE)	Cover
<u>1</u> UNDERCUT BANKS [1]	<u>1</u> POOLS > 70 cm [2]	<input type="checkbox"/> - EXTENSIVE > 75% [11]	12 Max 20
<u>1</u> OVERHANGING VEGETATION [1]	<u>0</u> ROOTWADS [1]	<input checked="" type="checkbox"/> - MODERATE 25-75% [7]	
<u>0</u> SHALLOWS (IN SLOW WATER) [1]	<u>0</u> BOULDERS [1]	<input type="checkbox"/> - SPARSE 5-25% [3]	
<u>1</u> ROOTMATS [1]	COMMENTS:	<input type="checkbox"/> - NEARLY ABSENT < 5% [1]	

3) CHANNEL MORPHOLOGY: (Check ONLY One PER Category OR check 2 and AVERAGE)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATIONS/OTHER	Channel
<input type="checkbox"/> - HIGH [4]	<input type="checkbox"/> - EXCELLENT [7]	<input type="checkbox"/> - NONE [6]	<input type="checkbox"/> - HIGH [3]	<input type="checkbox"/> - SNAGGING	11 Max 20
<input type="checkbox"/> - MODERATE [3]	<input type="checkbox"/> - GOOD [5]	<input checked="" type="checkbox"/> - RECOVERED [4]	<input checked="" type="checkbox"/> - MODERATE [2]	<input type="checkbox"/> - RELOCATION	
<input checked="" type="checkbox"/> - LOW [2]	<input checked="" type="checkbox"/> - FAIR [3]	<input type="checkbox"/> - RECOVERING [3]	<input type="checkbox"/> - LOW [1]	<input type="checkbox"/> - CANOPY REMOVAL	
<input type="checkbox"/> - NONE [1]	<input type="checkbox"/> - POOR [1]	<input type="checkbox"/> - RECENT OR NO RECOVERY [1]		<input type="checkbox"/> - DREDGING	
				<input type="checkbox"/> - IMPOUND.	
				<input type="checkbox"/> - ISLANDS	
				<input type="checkbox"/> - LEVEED	
				<input type="checkbox"/> - BANK SHAPING	
				<input type="checkbox"/> - ONE SIDE CHANNEL MODIFICATIONS	

4) RIPARIAN ZONE AND BANK EROSION (check ONE box per bank or check 2 and AVERAGE per bank) River Right Looking Downstream

RIPARIAN WIDTH		FLOOD PLAIN QUALITY (PAST 100 Meter RIPARIAN)		BANK EROSION		Riparian
L R (Per Bank)	L R (Most Predominant Per Bank)	L R	L R (Per Bank)			7.5 Max 10
<input type="checkbox"/> - WIDE > 50m [4]	<input checked="" type="checkbox"/> - FOREST, SWAMP [3]	<input type="checkbox"/> - CONSERVATION TILLAGE [1]	<input type="checkbox"/> - NONE/LITTLE [3]			
<input checked="" type="checkbox"/> - MODERATE 10-50m [3]	<input checked="" type="checkbox"/> - SHRUB OR OLD FIELD [2]	<input checked="" type="checkbox"/> - URBAN OR INDUSTRIAL [0]	<input checked="" type="checkbox"/> - MODERATE [2]			
<input checked="" type="checkbox"/> - NARROW 5-10 m [2]	<input checked="" type="checkbox"/> - RESIDENTIAL, PARK, NEW FIELD [1]	<input type="checkbox"/> - OPEN PASTURE, ROWCROP [0]	<input type="checkbox"/> - HEAVY/SEVERE [1]			
<input type="checkbox"/> - VERY NARROW < 5 m [1]	<input type="checkbox"/> - FENCED PASTURE [1]	<input type="checkbox"/> - MINING/CONSTRUCTION [0]				
<input type="checkbox"/> - NONE [0]	<u>1.5</u> <u>1.5</u>					

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

MAX. DEPTH (Check 1 ONLY!)	MORPHOLOGY (Check 1 or 2 & AVERAGE)	CURRENT VELOCITY (POOLS & RIFFLES!) (Check All That Apply)	Pool/Current
<input checked="" type="checkbox"/> > 1m [6]	<input type="checkbox"/> - POOL WIDTH > RIFFLE WIDTH [2]	<input type="checkbox"/> - EDDIES [1]	7 Max 12
<input type="checkbox"/> - 0.7-1m [4]	<input type="checkbox"/> - POOL WIDTH = RIFFLE WIDTH [1]	<input type="checkbox"/> - FAST [1]	
<input type="checkbox"/> - 0.4-0.7m [2]	<input type="checkbox"/> - POOL WIDTH < RIFFLE W. [0]	<input type="checkbox"/> - MODERATE [1]	
<input type="checkbox"/> - 0.2-0.4m [1]		<input checked="" type="checkbox"/> - SLOW [1]	
<input type="checkbox"/> - < 0.2m [POOL=0]	COMMENTS: <u>NO RIFFLES</u>	<input type="checkbox"/> - TORRENTIAL [-1]	
		<input type="checkbox"/> - INTERSTITIAL [-1]	
		<input type="checkbox"/> - INTERMITTENT [-2]	
		<input type="checkbox"/> - VERY FAST [1]	

CHECK ONE OR CHECK 2 AND AVERAGE

RIFFLE DEPTH	RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS	Riffle/Run
<input type="checkbox"/> - Best Areas > 10 cm [2]	<input type="checkbox"/> - MAX > 50 [2]	<input type="checkbox"/> - STABLE (e.g., Cobble, Boulder) [2]	<input type="checkbox"/> - NONE [2]	0 Max 8
<input type="checkbox"/> - Best Areas 5-10 cm [1]	<input type="checkbox"/> - MAX < 50 [1]	<input type="checkbox"/> - MOD. STABLE (e.g., Large Gravel) [1]	<input type="checkbox"/> - LOW [1]	
<input type="checkbox"/> - Best Areas < 5 cm [RIFFLE=0]		<input type="checkbox"/> - UNSTABLE (Fine Gravel, Sand) [0]	<input type="checkbox"/> - MODERATE [0]	
COMMENTS:			<input type="checkbox"/> - EXTENSIVE [-1]	10 Max 10
			<input checked="" type="checkbox"/> - NO RIFFLE [Metric=0]	

6) GRADIENT (ft/mi): 7 DRAINAGE AREA (sq.mi.): 557 %POOL: 100 %GLIDE: —
 %RIFFLE: — %RUN: —

* Best areas must be large enough to support a population of riffle-obligate species

Is Sampling Reach Representative of the Stream (Y/N) Y If Not, Explain:

Major Suspected Sources of Impacts (Check All That Apply):

None Industrial WWTP Ag Livestock Silviculture Construction Urban Runoff CSOs Suburban Impacts Mining Channelization Riparian Removal Landfills Natural Dams Other Flow Alteration Other: _____

Gear: _____ Distance: _____ Water Clarity: _____ Water Stage: _____ Canopy -% Open _____

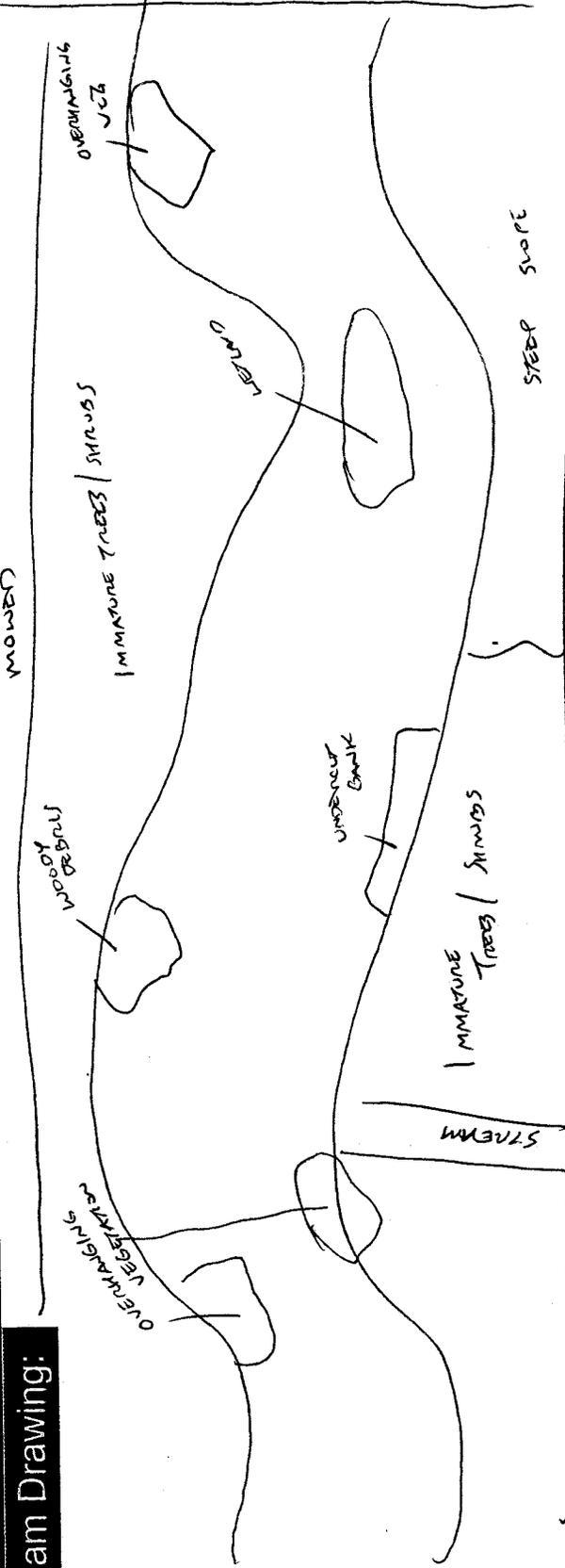
First Sampling Pass

Stream Measurements:

Average Width	Average Depth	Maximum Depth	Av. Bankfull Width	Bankfull Depth	W/D Ratio	Floodprone Area	Entrenchment Ratio

Subjective Rating (1-10) Aesthetic Rating (1-10) Gradient: - Low, - Moderate, - High

Stream Drawing:



RT. 317 (HAMILTON ROAD)

Yes/NO

Is Stream Ephemeral (no pools, totally dry or only damp spots)?

Is there water upstream? How Far: _____

Is There Water Close Downstream? How Far: _____

Is Dry Channel Mostly Natural?

Instructions for scoring the alternate cover metric: Each cover type should receive a score of between 0 and 3. Where: 0 - Cover type absent; 1 - Cover type present in very small amounts or if more common of marginal quality; 2 - Cover type present in moderate amounts, but not of highest quality or in small amounts of highest quality; 3 - Cover type of highest quality in moderate or greater amounts. Examples of highest quality include very large boulders in deep or fast water, large diameter logs that are stable, well developed rootwads in deep/fast water, or deep, well-defined, functional pools.



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) :

60

SITE NAME/LOCATION STREAM 2

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) _____

LENGTH OF STREAM REACH (ft) _____ LAT. _____ LONG. _____ RIVER CODE _____ RIVER MILE _____

DATE 8/28/06 SCORER R. Paul COMMENTS CLASS II

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY
MODIFICATIONS:

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.)

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	_____	<input checked="" type="checkbox"/> SILT [3 pt]	35
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	_____	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	_____
<input type="checkbox"/> BEDROCK [16 pt]	_____	<input type="checkbox"/> FINE DETRITUS [3 pts]	_____
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	15	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	_____
<input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	50	<input type="checkbox"/> MUCK [0 pts]	_____
<input type="checkbox"/> SAND (<2 mm) [6 pts]	_____	<input type="checkbox"/> ARTIFICIAL [3 pts]	_____

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 15 (A) 12 (B) 3

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 3

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):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input checked="" type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 14

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input checked="" type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> < 1.0 m (< 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 2.4

HHEI Metric Points

Substrate Max = 40
15
A + B

Pool Depth Max = 30
25

Bankfull Width Max=30
20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wide >10m		Mature Forest, Wetland		Conservation Tillage	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Moderate 5-10m		Immature Forest, Shrub or Old Field		Urban or Industrial	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Narrow <5m		Residential, Park, New Field		Open Pasture, Row Crop	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None		Fenced Pasture		Mining or Construction	

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check *ONLY* one box):

Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)

Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 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

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

- WWH Name: _____ Distance from Evaluated Stream _____
- CWH Name: _____ Distance from Evaluated Stream _____
- EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: _____ NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: _____ Township / City: _____

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 8/27/06 Quantity: 0.33"

Photograph Information: N/A

Elevated Turbidity? (Y/N): N Canopy (% open): 25%

Were samples collected for water chemistry? (Y/N): 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) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

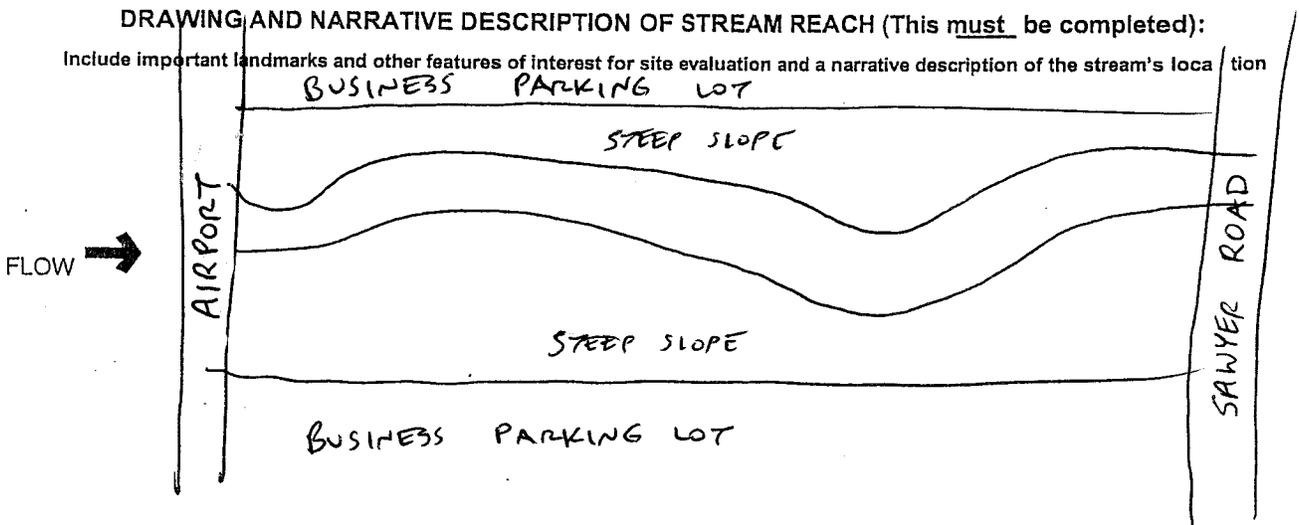
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) _____ Voucher? (Y/N) _____ Salamanders Observed? (Y/N) _____ Voucher? (Y/N) _____
Frogs or Tadpoles Observed? (Y/N) _____ Voucher? (Y/N) _____ Aquatic Macroinvertebrates 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 narrative description of the stream's location





Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) :

24

SITE NAME/LOCATION Stream 3 SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) < 12
 LENGTH OF STREAM REACH (ft) _____ LAT. _____ LONG. _____ RIVER CODE _____ RIVER MILE _____
 DATE 8/1/06 SCORER L. McKinnon COMMENTS Class I

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.)

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	_____	<input type="checkbox"/> SILT [3 pt]	_____
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	_____	<input type="checkbox"/> LEAF-PACK/WOODY DEBRIS [3 pts]	_____
<input type="checkbox"/> BEDROCK [16 pt]	_____	<input type="checkbox"/> FINE DETRITUS [3 pts]	_____
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	_____	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	_____
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	_____	<input type="checkbox"/> MUCK [0 pts]	_____
<input type="checkbox"/> SAND (<2 mm) [6 pts]	_____	<input checked="" type="checkbox"/> ARTIFICIAL [3 pts]	_____

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock -0- (A) **3** (B) **1**

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: _____ TOTAL NUMBER OF SUBSTRATE TYPES: _____

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):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm = 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input checked="" type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO-WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): **5**

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) **1.5**

HHEI Metric Points

Substrate Max = 40 **4** A + B

Pool Depth Max = 30 **5**

Bankfull Width Max = 30 **15**

This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank)		FLOODPLAIN QUALITY (Most Predominant per Bank)		Conservation Tillage	
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

<input checked="" type="checkbox"/> Flat (0.5 ft/100 ft)	<input type="checkbox"/> Flat to Moderate	<input type="checkbox"/> Moderate (2 ft/100 ft)	<input type="checkbox"/> Moderate to Severe	<input type="checkbox"/> Severe (10 ft/100 ft)
--	---	---	---	--

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

- WWH Name: _____ Distance from Evaluated Stream _____
 CWH Name: _____ Distance from Evaluated Stream _____
 EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: _____ NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: _____ Township / City: _____

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: ? Quantity: _____

Photograph Information: N/A

Elevated Turbidity? (Y/N): N Canopy (% open): 0

Were samples collected for water chemistry? (Y/N): 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) _____ If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) _____ Voucher? (Y/N) _____ Salamanders Observed? (Y/N) _____ Voucher? (Y/N) _____
Frogs or Tadpoles Observed? (Y/N) _____ Voucher? (Y/N) _____ Aquatic Macroinvertebrates Observed? (Y/N) _____ Voucher? (Y/N) _____

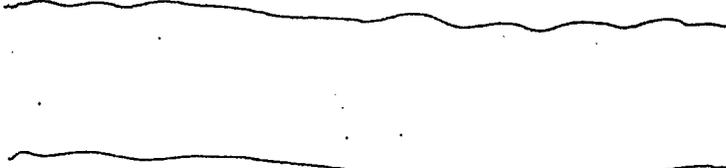
Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

FLOW →

Airport Fields



In district



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) :

24

SITE NAME/LOCATION Stream 3 SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) <12

LENGTH OF STREAM REACH (ft) _____ LAT. _____ LONG. _____ RIVER CODE _____ RIVER MILE _____

DATE 8/1/06 SCORER L. McKinnedy COMMENTS Class I

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

MODIFICATIONS: _____

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.)

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> Bldr Slabs [16 pts]	_____	<input type="checkbox"/> SILT [3 pt]	_____
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	_____	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	_____
<input type="checkbox"/> BEDROCK [16 pt]	_____	<input type="checkbox"/> FINE DETRITUS [3 pts]	_____
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	_____	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	_____
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	_____	<input type="checkbox"/> MUCK [0 pts]	_____
<input type="checkbox"/> SAND (<2 mm) [6 pts]	_____	<input checked="" type="checkbox"/> ARTIFICIAL [3 pts]	_____

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0- (A) **3** (B) **1**

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **3** TOTAL NUMBER OF SUBSTRATE TYPES: **1**

4 HHEI Metric Points (Substrate Max = 40)

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):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input checked="" type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): **5**

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): **1.5**

5 HHEI Metric Points (Pool Depth Max = 30)

15 HHEI Metric Points (Bankfull Width Max = 30)

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

WWH Name: _____ Distance from Evaluated Stream _____
 CWH Name: _____ Distance from Evaluated Stream _____
 EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: _____ NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: _____ Township / City: _____

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: ? Quantity: _____

Photograph Information: N/A

Elevated Turbidity? (Y/N): N Canopy (% open): -0-

Were samples collected for water chemistry? (Y/N): 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) _____ If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) _____ Voucher? (Y/N) _____ Salamanders Observed? (Y/N) _____ Voucher? (Y/N) _____
Frogs or Tadpoles Observed? (Y/N) _____ Voucher? (Y/N) _____ Aquatic Macroinvertebrates 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 narrative description of the stream's location

Airport Fields

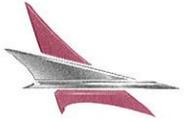


FLOW →

In stream

US Army Corps of Engineers Consultation

CRAA Letter to USACOE, March 28, 2008



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March 28, 2008

Ms. Kimberly Courts-Brown
Department of the Army
Huntington District, Corps of Engineers
502 Eighth Street
Huntington, West Virginia 25701-2070

RE: January 7, 2008 jurisdictional verification letter regarding the wetland and stream delineation at Port Columbus International Airport

Dear Ms. Courts-Brown:

There was an incorrect reference in the Port Columbus International Airport Administrative Draft Environmental Impact Statement (for the proposed replacement of Runway 10R/28L, development of a new passenger terminal and other associated airport projects) regarding the amount of acreage in the detailed study area. The amount should have been 1,750 rather than 750 acres, as shown in Section 5.10.2, on page 5.10-1 of Volume 1. As a result of this incorrect reference, your January 7, 2008 jurisdictional verification letter also incorrectly referenced 750 acres. The draft EIS has been corrected and I would respectfully request a revision of your January 7 letter.

If you have any questions, please contact me at 614-239-5014.

Sincerely,

Mark Kelby
Airport Planner

Cc: David Wall, CRAA
Rob Adams, Landrum & Brown
Katy Jones, FAA