

June 29, 2021

Administrator, DOSD Attn: Greg Fedner, P.E. Section Manager, Plan Review Section 1250 Fairwood Avenue Columbus, OH 43206

Subject: KIPP Columbus West Campus Expansion: Type III Variance from Stormwater Drainage Manual

Dear Mr. Fedner,

On behalf of the KIPP Foundation, EMH&T is submitting an application for a Type III variance from the City of Columbus Stormwater Drainage Manual for the proposed expansion of the KIPP Columbus Campus.

The proposed development site includes Stream Corridor Protection Zones (SCPZ) along one unnamed perennial tributary and three (3) unnamed ephemeral tributaries. The proposed development will result in direct, unpermitted impacts to 845 linear feet of two ephemeral tributaries and 0.99 acre of associated SCPZ. The mitigation plan developed for and included as part of this variance application includes onsite stream restoration activities and SCPZ enhancement.

The following information is provided in support of the application:

- Project Name: KIPP Columbus Primary and Elementary Schools West Campus Expansion
- Address, PID, Site Disturbance and Total Site Area:
 - Address: 2900 Inspire Dr., Columbus, OH 43224 PIDs: See table attached. Site Disturbance: 30 acres Total Site Area: 40 acres (West Campus Expansion)
- Primary (Owner) Contact:
 KIPP Foundation
 - Attn: Hanna D. Powell, Executive Director, KIPP Columbus 2900 Inspire Dr., Columbus, OH 43224 614-263-6150 x3201; hpowell@kippcolumbus.org

Additional information pertaining to the requested variance is included in the enclosed application document. Please contact me with any questions at (614) 775-4523, or by email at hdardinger@emht.com.

Sincerely,

Heather Darding

Heather L. Dardinger Senior Environmental Scientist

Enclosures: 1

Copies: Hanna Powell, KIPP Sandy Doyle-Ahern, EMH&T Ann Aubry, City of Columbus DPU Rob Priestas, City of Columbus DOSD

Parcel Ownership								
Owner	PID							
KIPP Columbus Foundation	190-004665-00							
KIPP Columbus Foundation	190-004666-00							
KIPP Columbus Foundation	190-004667-00							
KIPP Columbus Foundation	190-004669-00							
KIPP Columbus Foundation	190-004670-00							
KIPP Columbus Foundation	010-148129-00							
KIPP Columbus Foundation	190-004806-00							
KIPP Columbus Foundation	190-004807-00							
KIPP Columbus Foundation	190-004808-00							
KIPP Columbus Foundation	190-004820-00							
KIPP Columbus Foundation	190-004819-00							
KIPP Columbus Foundation	190-004815-00							
KIPP Columbus Foundation	190-004809-00							
KIPP Columbus Foundation	190-004814-00							
KIPP Columbus Foundation	190-004810-00							
KIPP Columbus Foundation	190-004813-00							
KIPP Columbus Foundation	190-004816-00							
KIPP Columbus Foundation	190-004817-00							
KIPP Columbus Foundation	190-004811-00							
KIPP Columbus Foundation	190-004812-00							
KIPP Columbus Foundation	190-004800-00							
KIPP Columbus Foundation	190-000003-00							
Bridgewalk Birdie LLC	010-005506-00							

Parcel Ownership



Engineers, Surveyors, Planners, Scientists

Delivering Solutions.

5500 New Albany Rd., Columbus, OH 43054 p. 614.775.4500 f. 614.775.4800 info@emht.com 20201263

KIPP COLUMBUS PRIMARY AND ELEMENTARY SCHOOLS WEST CAMPUS EXPANSION

City of Columbus SWDM Type III Variance Application

KIPP Foundation

June 29, 2021

emht.com



TABLE OF CONTENTS

1.0	INTRODUCTION 1 1.1 Project Location 1 1.2 Project Purpose 1 1.3 Delineation of Waters of the U.S. 1 1.4 Summary of Impacts 2
2.0	TYPE III VARIANCE (STREAM PROTECTION)
	2.4 Impacts to Stormwater Detention and Water Quality
~ ~	
3.0	3.1 Stream Channel Establishment
4.0	CONCLUSIONS 12
TAB	LES TABLE 1: Summary of Onsite Streams4 TABLE 2: Comparison of Project Alternatives7 TABLE 3: Expected HHEI and Comparison to Impacted Streams10
FIGL	JRES
	FIGURE 1: SCPZ Impact Location Map
EXH	IBITS EXHIBIT 1: Alternative A: Preferred EXHIBIT 2: Alternative B: Minimal Impact EXHIBIT 3: Alternative C: No Impact EXHIBIT 4: Mitigation Concept
APP	ENDICESAPPENDIX A:Delineation of Waters of the United StatesAPPENDIX B:USACE Approved Jurisdictional Determination

APPENDIX C: QHEI and HHEI Dataforms



1.0 INTRODUCTION

The following report provides information pertaining to a requested variance from the City of Columbus Stormwater Drainage Manual (May 2021) (the Manual) for the proposed KIPP Columbus West Campus Expansion project. The KIPP Foundation (KIPP) plans to construct this expansion of their existing 93-acre campus located northwest of Agler Road and Sunbury Road in northeast Columbus.

1.1 Project Location

The site is located within the Northeast Area Commission, near Columbus' eastern border with the City of Gahanna. The proposed expansion site encompasses ± 40 acres located on portions of 23 parcels situated north of Agler Road and west of Golf Green Drive and the existing KIPP campus (refer to Figure 1). The site mainly consists of vacant, wooded land, with open, maintained lawn areas around former residential lots in the center of the site and adjacent to Agler Road. An unnamed perennial tributary of Alum Creek flows through the northern portion of the site from west to east.

1.2 Project Purpose

The expansion will occupy ± 30 acres of the 40-acre expansion site. It will provide for two new school buildings and recreation areas, future assembly and community buildings, and associated roadways and parking lots. The new school buildings will house the KIPP Columbus Primary (K-1) and Elementary (2-5) schools, while the existing campus facilities will serve as the KIPP Columbus Middle School, High School, and Early Learning Center. The proposed expansion will nearly double the campus capacity, allowing KIPP to meet its growing enrollment waitlist.

1.3 Delineation of Waters of the U.S.

A delineation of the project site was completed and submitted to the U.S. Army Corps of Engineers (USACE) in order to identify the location, extent and quality of stream and wetland features within the project area (Appendix A). The USACE issued an Approved Jurisdictional Determination for the site on April 21, 2021 (Appendix B). Within the expansion area, one perennial stream, three ephemeral streams, six isolated wetlands, one ephemeral swale and one stormwater ditch were identified. The wetlands are all located outside the limits of the SCPZ. Photographs and an aerial map depicting these features are provided in the delineation report (Appendix A).

Stream 1, an unnamed tributary of Alum Creek, flows for approximately 1,972 linear feet along the northern boundary of the project site. As defined by the Manual, the Stream Corridor Protection Zone (SCPZ) along Stream 1 is 147 feet wide. In addition, there are three small, ephemeral tributaries (Streams 2, 3 and 4) located within the project site. Stream 4 is located north of Stream 1, outside the expansion work area. Streams 2 and 3 flow through the expansion area in a northeasterly direction for approximately 666 linear feet and 502 linear feet, respectively. These streams each have a 50-foot wide SCPZ.



1.4 Summary of Impacts

As shown on Exhibit 1, two roadway crossings will result in impacts to a 143-linear foot portion of the Stream 2 channel, a 79-linear foot portion of the Stream 3 channel, and 0.27 acre of associated SCPZ. These crossings are a permitted use in the SCPZ, and do not require a variance from the Manual.

The expansion project will also result in direct impacts to an additional 422 linear feet of Stream 2 and 423 linear feet of Stream 3, along with 0.99 acre of associated SCPZ. These impacts are necessary to allow for development of the proposed eastern Primary School building, assembly building, recreational/playground space, and associated parking. These impacts are not considered permitted uses per the Manual.

As such, KIPP is seeking a Type III variance for impacts to 845 linear feet of ephemeral channel and 0.99 acre of SCPZ along Streams 2 and 3 for the purpose of completing the proposed expansion. An Isolated Wetland Permit and Ephemeral Stream General Permit from the Ohio EPA will also be requested for impacts to 0.86 acre of isolated wetland and 1,067 linear feet of ephemeral stream.







2.0 TYPE III VARIANCE (STREAM PROTECTION)

The SCPZ consists of the stream channel and the adjacent riparian area. Its purpose is to allow the natural, lateral movement of the stream, provide sufficient area for flood conveyance, protect water quality and prevent structures from being impacted by natural streambank erosion. A SCPZ is present along an unnamed perennial tributary and three unnamed ephemeral tributaries at the KIPP Campus expansion site. The Preferred Plan will encroach upon two of the ephemeral streams and their SCPZs.

KIPP is requesting a variance from Section 1.3.2 and 1.3.3 of the Manual for the proposed expansion, specifically a variance allowing for SCPZ and stream channel impacts in order to construct one of the proposed school buildings and complete associated earthwork.

2.1 Proposed SCPZ Impacts

Under the Preferred Alternative, discussed below, the proposed area of non-permitted impact within the SCPZ is 0.99 acre, which includes 845 linear feet of direct channel impacts to Streams 2 and 3 (refer to Exhibit 1). Streams 2 and 3 are small, ephemeral tributaries with drainage areas of less than 0.1 square mile. As such, they each have a SCPZ width of 50 feet, which is the minimum provided per the Manual. As further discussed below, the proposed impacts to the channel and the SCPZ will allow for construction of the preferred expansion building layout.

2.2 Existing Conditions

The property is bordered by Agler Road to the south, the existing KIPP campus to the east and residential developments to the north and west. The majority of the project area is forested and undeveloped, with some open, maintained lawn areas in the center of the site and along Agler Road. The site is located within the Bliss Run-Alum Creek subwatershed (HUC: 05060001-16-02). Stream 1 flows eastward through the northern portion of the property toward Alum Creek. Three additional ephemeral streams are located on the site. The onsite streams are summarized in Table 1, and described further below.

Stronger	Channel (If)	SCP	Ζ (αc)	Watershed (as)		ппеі					
Sheam	Channel (II)	Width (ft)	Area (ac)	watershea (ac)	QHEI						
Stream 1	1,972	147	5.95	640	69						
Stream 2	666	50	0.65*	19		33					
Stream 3	502	50	0.61	22		18					
Stream 4	117	50	0.05*	20		n/a					
Total	3,257		7.26								

TABLE 1 Summary of Onsite Streams

* Excludes the portions of SCPZ that overlap the Stream 1 SCPZ.

Within the project site, there are 1,972 linear feet of Stream 1, which is an unnamed, undesignated, perennial tributary of Alum Creek. A Qualitative Habitat Evaluation Index (QHEI) assessment was completed for Stream 1 within the project area. The stream received a QHEI score of 69, which is indicative of 'good' habitat quality. Stream 1 was assigned a provisional aquatic life designation of Warmwater Habitat (WWH).



Streams 2 and 3 are unnamed, ephemeral streams that flow through the project site in a northeasterly direction for approximately 666 linear feet and 502 linear feet, respectively. The streams are located within a sparsely forested area dominated by young, immature trees with an invasive honeysuckle understory.

A Headwater Habitat Evaluation Index (HHEI) assessment was performed on these streams. The HHEI metric is applicable to streams with a watershed area of less than one square mile and maximum pool depths less than 40 centimeters, both of which apply to Streams 2 and 3. The streams received HHEI scores of 33 and 18, respectively, indicative of Class I to Class II Primary Headwater Habitat. The HHEI dataforms are provided in Appendix A.

As ephemeral streams, Streams 2 and 3 have little or no aquatic life potential and have little or no potential to achieve higher stream functions. Based upon the field observations and the HHEI assessment, Streams 2 and 3 exhibit minimal stream functions. These channels primarily serve to convey overland stormwater flow from the surrounding land. They have no aquatic life potential, and have flowing water only for very short time periods following significant rainfall events.

One additional ephemeral stream, Stream 4, is located on the project site. Stream 4 flows south for 117 linear feet from the northern site boundary to Stream 1. An HHEI was not completed for Stream 4, as it will not be impacted by the project.

2.3 Site Development Alternatives

2.3.1 Proposed Conditions / Preferred Alternative

Under the Preferred Alternative (Alternative A, Exhibit 1), a 30-acre campus expansion will be built on approximately 40 acres of land located west of the existing KIPP campus. A drive will be constructed off Agler Road to access the proposed expansion, with connections to Golf Green Drive and Inspire Drive to the east. The expansion will consist of two new school buildings, playground space, a future assembly building, a future community building, and associated drives and parking. Stormwater management will be provided via a basin to be located on the eastern campus. The new school buildings will house the KIPP Columbus Primary (K-1) and Elementary (2-5) schools.

The Preferred Alternative will result in **845 linear feet of ephemeral channel impacts and 0.99** acre of SCPZ impacts. Specifically, the following non-permitted impacts to streams and associated SCPZ are proposed:

- 422 linear feet of direct channel impacts to Stream 2;
- 0.49 acre of SCPZ impacts to Stream 2;
- 423 linear feet of direct channel impacts to Stream 3; and
- 0.50 acre of SCPZ impacts to Stream 3.

The impacts to the Stream 2 and Stream 3 channels and SCPZ are necessary for construction of the proposed Primary School building, recreational/playground space, parking, and associated grading/earthwork. The proposed layout maximizes the developable use of the site and achieves the desired expansion program consisting of a new 88,600-square foot Primary School building, a



new 151,500-square foot Elementary School building, playground area, future $\pm 42,790$ -square foot assembly building, future $\pm 42,790$ -square foot community building, and the required associated parking. The proposed impacts will result in the loss of low quality, ephemeral stream channel and will preserve the higher quality Stream 1 channel and SCPZ.

2.3.2 Minimal Impact Alternative

In the Minimal Impact Alternative (Alternative B, Exhibit 2), the direct channel and SCPZ impacts to Stream 3 have been eliminated by reducing the size of the Primary School building and associated parking by approximately half. Under this alternative, non-permitted impacts will be limited to Stream 2 and will include:

- 422 linear feet of direct channel impacts to Stream 2; and
- 0.49 acre of SCPZ impacts to Stream 2.

The reduction of the Primary School building under the Minimal Impact Alternative will result in the loss of approximately 44,300 square feet of building space. This alternative does not achieve the necessary buildable space for the campus expansion and significantly reduces the development's viability. Reduction of the size of the Primary School would restrict the size of the kindergarten and first grade cohorts that can be supported by KIPP, putting the size of those cohorts out of balance with the later grades served on the KIPP Learning Campus.

Moreover, avoiding impacts will complicate the grading for the expansion and increase the overall project cost. If the Stream 3 SCPZ is to be avoided, the pad graded for the adjacent developed areas will require retaining walls in order to achieve the required grade differential between the developed pad and the undisturbed SCPZ.

The avoided SCPZ that would be left under the Minimal Impact Alternative would also have an impact on the safety of the campus. The wooded area and stream corridor would be difficult to patrol by campus security and may provide cover for criminal mischief. The trees, dense underbrush and steep terrain along the stream channel, immediately adjacent to campus facilities, are also undesirable for the safety of students and staff traversing the campus.

2.3.3 Full Compliance / No Impact Alternative

The Full Compliance/No Impact Alternative (Alternative C) is shown on Exhibit 3. In order to avoid all non-permitted stream channel and SCPZ impacts on the site, the Primary School building and associated parking must be reduced in size, as in the Minimal Alternative, and the playground area must be shifted to the east. As a consequence, the future assembly building must be eliminated. This alternative would include a street crossing resulting in impacts to a portion of the Stream 2 channel and SCPZ. However, this is a permitted use in the SCPZ, and does not require a variance from the Manual.

The modification to the Primary School building and loss of the future assembly building under the No-Impact Alternative will result in an overall loss of 87,090 square feet of building space. As described under the Minimal Alternative, the reduction in the Primary School building would significantly reduce and disproportion the K-1 cohorts on the KIPP Learning Campus. Additionally,



under the No-Impact Alternative, the Elementary School building would will be located at significant distance (approximately 400 feet) from, and lack a direct connection to, the playground area. This layout is unacceptable for the proposed use and does not meet the goals of the expansion. The No Impact Alternative reduces and compromises the expansion to the extent that it is no longer viable.

As described under the Minimal Impact Alternative, retaining walls will be required along the pads adjacent to the SCPZ in order to achieve the required grade differential. The avoided SCPZ areas will also have a significant negative impact on the safety, security and visual aesthetics of the campus expansion.

2.3.4 Comparison of Project Alternatives

As summarized in Table 2, the Preferred Alternative will result in the following non-permitted impacts: 422 linear feet of Stream 2 channel, 0.49 acre of Stream 2 SCPZ, 423 linear feet of Stream 3 channel and 0.50 acre of Stream 3 SCPZ. The Minimal Impact Plan will reduce these impacts by approximately half by avoiding the non-permitted impacts to Stream 3.

Alternative	Permitte	d Use	Non-Permitt	ed Impact	Remaining						
Alternative	Channel (If)	Channel (If) SCPZ (ac) Channel (If) SCPZ (ac)		Channel (If)	SCPZ (ac)						
Existing Condition					3,257	7.26					
Preferred Plan	222	0.27	845	0.99	2,190	6.00					
Minimal Plan	143	0.16	422	0.49	2,692	6.61					
No Impact Plan	143	0.16	0	0	3,114	7.10					

TABLE 2 Comparison of Project Alternatives

The layout of the development in the Preferred Alternative maximizes the developable acreage on the project site, while still preserving the highest quality, perennial stream channel and associated SCPZ along Stream 1. Reducing the proposed impacts under the Minimal Impact and No Impact Alternatives would not provide sufficient building space and would significantly compromise the expansion plan, particularly as it relates to serving the primary grades. Both the Minimal and No Impact alternatives reduce the size of the new Primary School building by 50 percent. The No Impact alternative additionally eliminates the future assembly building and locates the playground at significant distance from the Elementary School building, rendering the project infeasible.

2.4 Impacts to Stormwater Detention and Water Quality

Of the three alternatives, the Preferred Plan has the greatest impervious area, thereby slightly increasing the volume of stormwater runoff as compared to the Minimal or No Impact Alternatives. However, the stormwater management facilities for all three alternatives (to be located on the eastern campus) would be designed to comply with the stormwater management and water quality requirements of both the City of Columbus and Ohio EPA. Thus, each alternative would have similar impacts on stormwater detention and water quality.

2.5 Statement of Hardship

The proposed non-permitted channel and SCPZ impacts under the Preferred Plan Alternative are driven by the need to maximize the developable space on the property to achieve the required



expansion program. Based on enrollment needs, KIPP is seeking to double its campus capacity, requiring a minimum of 240,100 square feet of new building space, new playground space, as well as opportunities for implementation of future associated buildings. As detailed above, implementation of the Minimal Impact Alternative would significantly impact the viability of the project. The proposed minimization would result in a loss of half the Primary School building, increase development costs, and have significant impacts to the safety and aesthetics of the development. Avoidance of all stream and SCPZ impacts would further impact the project, resulting in the elimination of the future assembly building and inefficiencies in the overall layout, rendering the project unviable. Thus, full compliance with the Manual will result in a significant hardship to KIPP and the educational community it serves. <u>Thus, KIPP respectfully requests approval of the variance for the Preferred Plan Alternative.</u>



3.0 MITIGATION

As described in the Manual, adequate mitigation must be provided for impacts to the SCPZ by creating equivalent mitigation also within a SCPZ. Additionally, for direct stream impacts, the Manual states that "the applicant must demonstrate that the predicted post-construction QHEI/HHEI will meet or exceed the existing QHEI/HHEI...If a stream is proposed to be enclosed into a storm sewer or otherwise eliminated, then an equivalent impaired stream length elsewhere must be remediated to demonstrate a substantial improvement of its QHEI/HHEI score to a maximum practicable extent"

The Manual states, "Generally, mitigation SCPZ will be considered equivalent if it performs the same function as the disturbed SPCZ." It is the City's preference that mitigation occur on the same site as the SCPZ encroachment, or as close as possible if onsite mitigation is infeasible. The Manual specifies that mitigation should consist of equivalent SCPZ created at the following ratios: 1:1 onsite, 1:1.5 on an adjacent site, and 1:2 in the same HUC-12 watershed.

Under the Preferred Alternative (Exhibit 1), the proposed impacts requiring mitigation include 845 linear feet of ephemeral stream and 0.99 acre of SCPZ. A total of 6.46 acres along Stream 1, including 1,972 linear feet of channel and the 5.95-acre SCPZ, will be preserved within a conservation easement. To offset the proposed impacts, KIPP is proposing to complete onsite mitigation, creating new stream habitat and enhancing SCPZ in the eastern portion of the existing KIPP campus. This onsite mitigation will include the following (refer to Exhibit 4).

- 1. Establishment of 975 linear feet of new stream habitat between the existing stormwater wetland basin east of the KIPP high school and Alum Creek;
- 2. Enhancement of 0.99 acre of SCPZ along the new stream channel; and
- 3. Preservation of approximately 0.99 acres of SCPZ associated with the mitigation within a conservation easement.

3.1 Stream Channel Establishment

3.1.1 Proposed Mitigation Plan

The proposed stream mitigation project will establish 975 linear feet of new ephemeral stream, and reestablish approximately 0.99 acre of forested riparian habitat within its associated SCPZ. The new stream channel will be established between the existing stormwater wetland basin, which is located east of the KIPP high school, and Alum Creek. The stormwater wetland currently outlets via a level spreader and overland flow. The proposed mitigation will provide a small stream channel from the outlet, as shown on Exhibit 4.

The new channel will be constructed with a low-flow pilot channel with some deeper pools. Coarse substrate, i.e., gravel and cobble, will be installed within the channel. Floodplain benches will be constructed on either side of the channel, beyond which the stream banks will be graded at a gradual 4:1 slope. Based on the tributary area of 49.5 acres, the total SCPZ width will be approximately 56 feet, which will be planted with native trees and shrubs, as listed on Exhibit 4. The vegetated benches and riparian buffer will provide stability and improved ecological function



to the stream. The established stream channel and 56-foot wide SCPZ will be protected in perpetuity via a conservation easement to be granted to the City of Columbus.

3.1.2 Expected Habitat Conditions

The proposed stream is expected to have an ephemeral to intermittent flow regime, similar to that of Stream 3 on the property. The stream will be designed to have some deeper pools of up to 8 inches, and a bankfull width of approximately four feet. Coarse substrate (mixed gravel and cobble) will be installed to provide in-stream structure. Based on these parameters, the stream is expected to obtain a post-construction HHEI score of at least 56, which is indicative of Class II PHW habitat. As noted in the post-construction HHEI (Appendix C) and shown below in Table 2, this represents a significant improvement over the habitat provided by the impacted streams, particularly the pool habitat quality.

Metric	Expected for New Stream	Stream 2	Stream 3
Substrate	16	8	13
Maximum Pool Depth	25	5	5
Bankfull Width	15	5	15
Total HHEI Score	56	18	33

TABLE 3 Expected HHEI and Comparison to Impacted Streams

3.1.3 Comparison of Proposed Impacts and Mitigation

As described in Section 2.2, Streams 2 and 3, which will be impacted by the proposed project, received HHEI scores of 33 and 18. These scores indicate that Streams 2 and 3 are Class I and Class II Primary Headwater (PHW) streams, which have limited potential to support aquatic life or higher stream functions as they do not exhibit perennial flow. The channels primarily serve to convey overland stormwater flow from the surrounding forest to Stream 1 and Alum Creek.

As described in Section 3.1.2, the stream to be established is expected to receive a post-construction HHEI score of at least 56, indicative of Class II PHW habitat. This post-construction HHEI score represents a lift of at least +23 points over the existing conditions of Stream 3 (the higher quality of the streams to be impacted). The new stream will serve to transport water from the stormwater wetland. The stream channel will dissipate energy during high-water flows to reduce erosion, enhance groundwater recharge, and further improve water quality entering Alum Creek. The 0.99 acre of forested SCPZ to be established along the stream will provide wildlife habitat and additional water quality filtering benefits.

Overall, the proposed stream channel improvements will provide approximately 975 linear feet of new ephemeral stream, providing an HHEI score of at least 56, which will exceed Class II PHW standards. This mitigation will offset non-permitted impacts to 845 linear feet of low quality, ephemeral stream (HHEI of 18-33). The mitigation will occur on the same site as the project impacts, providing significant benefits to local water quality and habitat in the Bliss Run-Alum Creek watershed.



3.2 Proposed SCPZ Mitigation Ratio

The proposed mitigation project will provide for the enhancement of approximately 0.99 acre of SCPZ along the new stream to be established. Based upon the proposed non-permitted SCPZ impacts of 0.99 acres, this provides mitigation at a **ratio of 1 to 1**, meeting the 1:1 onsite ratio provided by the Manual. This mitigation is more than equivalent, as the mitigation SCPZ will provide much higher functions and value to water quality than the SCPZ to be impacted along Streams 2 and 3.



4.0 CONCLUSIONS

KIPP respectfully requests approval of the Type III variance for the Preferred Project Alternative for the KIPP Columbus West Campus Expansion project. The proposed non-permitted impacts to 845 linear feet of ephemeral channel and 0.99 acres of SCPZ have been carefully considered, and ultimately determined to be necessary to meet the project's requirements. Reducing or eliminating these impacts would have a significant impact on the project's viability, as described herein.

The mitigation proposed for the Preferred Alternative will be achieved on the project site and includes the establishment of 975 linear feet of new ephemeral stream channel and approximately 0.99 acre of native riparian tree and shrub planting within the associated SCPZ. The mitigation activities will result in a significant ecological lift as compared to the current condition of the Stream 2 and 3 channels to be impacted. The SCPZ mitigation will result in a mitigation ratio of 1 to 1. The proposed mitigation is more than equivalent as the areas to be restored/enhanced will perform significantly higher functions than the area to be impacted.



EXHIBITS



LEGEND

Stream Corridor Protection Zone (5.95 Ac)
Stream Corridor Protection Zone Removal (0.99 Ac)
Stream Corridor Protection Zone Permitted Use (0.27 Ac)
 Perennial Stream
 Ephemeral Stream

STREAM AND SCPZ IMPACTS

	EXISTING		PERMITTED USE IMPACT		NON-PERMITTED IMPACT		TOTAL IMPACT	
STREAM	LENGTH (LF)	SCPZ (AC)	LENGTH (LF)	SCPZ (AC)	LENGTH (LF)	SCPZ (AC)	LENGTH (LF)	SCPZ (AC)
2	666	0.65*	143	0.16	422	0.49	565	0.65
3	502	0.61	79	0.11	423	0.50	502	0.61
Total	1,168	1.26	222	0.27	845	0.99	1,067	1.26

* Excludes the portion of the Stream 2 SCPZ that overlaps the Stream 1 SCPZ.

GRAPHIC SCALE



KIPP Exhibit 1 - Preferred Impact (Alt. A)

ЕМНТ	Date: June 29, 2021
	Scale: 1" = 60'
Evans, Mechwarr, Hambleton & Titon, I Engineers • Surveyars • Planners • Scient 5500 New Albany Road, Columbus, OH 43	16. 55 54 Job No: 2020-1263
Phone: 614.775.4500 Toll Ree: 698.775.3 emht.com	Sheet: 1 of 1
	REVISIONS
MARK DATE DESCRIPTION	



LEGEND

Stream Corridor Protection Zone (6.56 Ac)
Stream Corridor Protection Zone Removal (0.49 Ac)
Stream Corridor Protection Zone Permitted Use (0.16 Ac)
 Perennial Stream
 Ephemeral Stream

STREAM AND SCPZ IMPACTS

ETOC AND	EXISTING PERMITTED USE IMPACT NON-PERMITTED IMPACT TOTAL LENGTH SCPZ SCPZ </th <th>TOTAL II</th> <th colspan="2">IMPACT</th>	TOTAL II	IMPACT					
STREAM	LENGTH (LF)	SCPZ (AC)	LENGTH (LF)	SCPZ (AC)	LENGTH (LF)	SCPZ (AC)	LENGTH {LF}	SCPZ (AC)
2	666	0.65*	143	0.16	422	0.49	565	0.65
3	502	0.61	0	0	0	0	0	0
Total	1,168	1.26	143	0.16	422	0.49	565	0.65

Excludes the portion of the Stream 2 SCPZ that overlaps the Stream 1 SCPZ.

GRAPHIC SCALE



KIPP Exhibit 2 - Minimal Impact (Alt. B)

	Μ	ΗT	Date: June 29, 2021 Scale: 1" = 60'
Evans, M Engineer 5500 New	echwart, He s • Surveyors / Albany Roa	ambleton & Tilton, Inc. • Planners • Scientists d. Columbus, OH 43054	Job No: 2020-1263
Phone: 61	4.775.4500 emh	Toll Free: 688.775.3648 C.COM	Sheet: 1 of 1
		RE	EVISIONS
MARK	DATE	DESCRIPTION	





Stream Corridor Protection Zone (7.05 Ac) Stream Corridor Protection Zone Permitted Use (0.16 Ac)

Perennial Stream

Ephemeral Stream

STREAM AND SCPZ IMPACTS

CTOCANA	EXISTING		PERMITTED USE IMPACT		NON-PERMITTED IMPACT		TOTAL IMPACT	
STREAM	LENGTH (LF)	SCPZ (AC)	LENGTH (LF)	SCPZ (AC)	LENGTH (LF)	SCPZ (AC)	LENGTH (LF)	SCPZ (AC)
2	666	0.65*	143	0.16	0	0	143	0.16
3	502	0.61	0	0	0	0	0	0
Total	1,168	1.26	143	0.16	0	0	143	0.16

* Excludes the portion of the Stream 2 SCPZ that overlaps the Stream 1 SCPZ.

GRAPHIC SCALE



KIPP Exhibit 3 - No Impact (Alt. C)

E	Μ	HT	Date: June 25, 2021 Scale: 1" = 60'						
Evans, N Engineer 5500 Nev	echwart, He s • Surveyors Albany Roa	ambleton & Iliton, Inc. • Planners • Scientists ad, Columbus, OH 43054	Job No: 2020-1263						
Phone: 61	4.775.4500 emh	Toli Free: 688.775.3648 IL.COM	Sheet: 1 of 1						
		RE	EVISIONS						
MARK	DATE	DESCRIPTION							



KIPP Exhibit 4 - SCPZ MITIGATION CONCEPT EXHIBIT



APPENDIX A:

Delineation of Waters of the U.S.



Engineers, Surveyors, Planners, Scientists

Delivering Solutions.

5500 New Albany Rd., Columbus, OH 43054 p. 614.775.4500 f. 614.775.4800 info@emht.com 20210139

KIPP NORTH PROPERTY LOCATED NORTH OF AGLER ROAD AND ON THE WEST SIDE OF GOLF GREEN DRIVE, CITY OF COLUMBUS, FRANKLIN COUNTY, OHIO

Delineation of Waters of the United States

KIPP Columbus Foundation

March 11, 2021

emht.com



TABLE OF CONTENTS

1.0	INTRODUCTION1
2.0	LITERATURE REVIEW
	2.1 Topographic Features1
	2.2 Mapped Soils
	2.3 Hydrologic Conditions
3.0	DELINEATION INVESTIGATION RESULTS
	3.1 Potential Jurisdictional Features
	3.2 Non-Potential Jurisdictional Features
4.0	WETLAND HABITAT ASSESSMENT5
5.0	REGULATORY JURISDICTION5
6.0	CONCLUSIONS
7.0	REFERENCES
TABL	ES

	2
eatures	4
Onsite Surface Water Features	4
mmary	5
mmary	

EXHIBITS

Exhibit 1:	Location Map
Exhibit 2:	USGS Topographic Map
Exhibit 3:	Soil Survey of Franklin County
Exhibit 4:	Flood Insurance Rate Map
Exhibit 5:	National Wetland Inventory Map
Exhibit 6:	Delineation Map

PHOTOGRAPHS

APPENDICES

APPENDIX A:	Investigative Methodology
APPENDIX B:	USACE Wetland and Upland Dataforms
APPENDIX C:	ORAM Dataforms



1.0 INTRODUCTION

A routine delineation of Waters of the United States, including streams and wetlands, has been conducted and a report prepared by EMH&T for an approximately 39.8-acre property (KIPP North), located north of Agler Road and west of Golf Green Drive, in the City of Columbus, Franklin County, Ohio (Exhibit 1). This study was performed at the request of and is for the exclusive use of KIPP Columbus Foundation with an extension of reliance to Vorys, Sater, Seymour and Pease LLP. **KIPP Columbus Foundation requests an Approved Jurisdictional Determination (AJD) for the one (1) perennial stream, six (6) potentially non**jurisdictional isolated wetlands, three (3) potentially non-jurisdictional ephemeral streams, one (1) nonjurisdictional ephemeral swale, and one (1) non-jurisdictional ditch within the boundaries of the KIPP North Property.

The study area mainly consists of vacant wooded land. A gravel access road and residential lots are located in the central and southern portions of the study area. The study area is surrounded by residential houses/buildings and a school. The approximate center coordinates of the site are 40.029343°, - 82.943489°.

The site is located in the Headwaters of Bliss Run-Alum Creek subbasin (HUC:05060001-16-02) within the Upper Scioto Watershed. The study area is regulated by the U.S. Army Corps of Engineers (USACE) Huntington District.

A Waters of the U.S. Delineation Report was submitted to the USACE on April 10, 2020 for the KIPP North Property. An Approved Jurisdictional Determination (LRH-2020-448-SCR) was granted by the USACE for the KIPP North Property, dated July 13, 2020. This delineation is a re-submittal of the original delineation report due to the addition of approximately 1.5 acres of land to the KIPP North Property. The updated KIPP North Property delineation report includes approximately 38.9 acres of land and has updated information on the surface water features based on the Navigable Waters Protection Rules (NWPR): Definition of "Waters of the United States". In this final rule, the agencies interpret the term "Waters of the United States" to encompass: Traditional navigable waters' perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters. Therefore, for the remainder of this report, the KIPP North Property will be the 39.8-acre site.

2.0 LITERATURE REVIEW

A review was made of available topographic maps, soils maps, and wetland inventory maps. This information helped determine topography and soil types present in the study area. It also identified any previously mapped wetlands and whether any portions of the study area were located within mapped floodways.

2.1 Topographic Features

As shown on Exhibit 2, the site is between the elevations of 780 to 830 feet (National Geodetic Vertical Datum) according to the USGS 7.5' Series Northeast Columbus, Ohio quadrangle (USGS, 1983). One (1) stream feature is mapped on the northern portion of the site. No open water ponds, marsh symbols, or other streams are mapped for the site.

2.2 Mapped Soils

According to the Web Soil Survey for Franklin County, Ohio (USDA, 2019) as shown on Exhibit 3, the site contains six (6) soil types. These soils are listed in Table 1 along with their hydric status.



Mapped Soil Unit	Hydric Status	Hydric Inclusions	Location of Hydric Inclusions	
Alexandria silt loam, 6 to 12 percent slopes, eroded (AdC2)	Non-hydric with hydric inclusions	Pewamo (5%)	Depressions	
Alexandria silt loam, 18 to 25 percent slopes, eroded (AdE2)	Non-Hydric			
Bennington silt loam, 2 to 6 percent slopes (BeB)	Non-hydric with hydric inclusions	Pewamo (3%), Condit (3%)	Depressions	
Bennington Urban land complex, 0 to 6 percent slopes (BfB)	Non-hydric with hydric inclusions	Typic ednoaquents (6%)	Moraines	
Cardington silt loam, 2 to 6 percent slopes (Crd1B1)	Non-hydric with hydric inclusions	Pewamo (3%), Condit (4%)	Depressions	
Shoals silt loam, occasionally flooded (Sh)	Non-hydric with hydric inclusions	Sloan (5%)	Depressions	

TABLE 1	Hvdric	Status	of	Onsite Soils
	,		•••	•

A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (USDA-NRCS, 2019). As shown on the Web Soil Survey for Franklin County, Ohio (Exhibit 3), Alexandria silt loam, 6 to 12 percent slopes, eroded (AdC2) is a non-hydric soil with inclusions of Pewamo in depressions. Bennington silt loam, 2 to 6 percent slopes (BeB) and Cardington silt loam, 2 to 6 percent slopes (Crd1B1) are non-hydric soils with inclusions of Pewamo and Condit in depressions. Bennington Urban land complex, 0 to 6 percent slopes (BfB) is a non-hydric soil with inclusions of typic ednoaquents in moraines. Shoals silt loam, occasionally flooded (Sh) is non-hydric soil with inclusions of Sloan in depressions. Alexandria silt loam, 18 to 25 percent slopes, eroded (AdE2) is non-hydric soil.

2.3 Hydrologic Conditions

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) was reviewed for the site (FEMA, 2018). As shown on Exhibit 4, the site lies within Zone X (unshaded), which is an area determined to be outside the 500-year floodplain.

The United States Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI) map for Franklin County, Ohio was reviewed for the site (USFWS, 2019). As shown on Exhibit 5, one (1) stream feature is mapped on the northern portion of the site.

3.0 DELINEATION INVESTIGATION RESULTS

EMH&T field scientists conducted a field investigation on March 3, 2021 to identify the location, extent, and quality of wetland and stream features on the site. One (1) perennial stream, six (6) potentially nonjurisdictional isolated wetlands, three (3) potentially non-jurisdictional ephemeral streams, one (1) nonjurisdictional ephemeral swale, and one (1) non-jurisdictional ditch were identified for confirmation by the USACE. The identified surface water features are summarized in the following sections. The boundaries identified by EMH&T are potential, as only the USACE has the final authority to determine whether a wetland or water is jurisdictional. The investigative methodology employed is summarized in Appendix A. Photographs of these surface water features are included in the Photographs section.



3.1 Potential Jurisdictional Features

As shown on Exhibit 6, one (1) potentially jurisdictional stream (Stream 1) was identified within the study area. Table 2 lists the extent of the surface water features identified and Table 3 summarizes the jurisdictional classification of each surface water feature. The USACE wetland and upland data forms are provided in Appendix B.

3.2 Potential Non-Jurisdictional/Isolated Features

Six (6) potentially non-jurisdictional wetlands (isolated) were observed within the study area. The wetlands (Wetland A through Wetland F) do not receive hydrology from any jurisdictional surface water features. In EMH&T's opinion, the wetlands have no jurisdictional surface water connection and would therefore, be considered isolated.

Three (3) potentially non-jurisdictional ephemeral streams (Streams 2, 3, and 4) were observed within the study area. Ephemeral is defined in the Navigable Water Protection Rule (NWPR) as "surface water flowing or pooling only in direct response to precipitation." Stream 2 is an unnamed feature that begins in an eroded channel along a mowed grassy area. The stream extends into the wooded area but lacks the biological, hydrological, and physical characteristics of an intermittent stream. In EMH&T's opinion, Stream 2 is an ephemeral stream. During the field investigation on March 3, 2021, the surface water observed in Stream 2 appears to be from snowmelt.

Stream 3 flows through a wooded area then enters a culvert beneath the eastern adjacent KIPP School, indicating that is does not contribute surface water to a navigable water. The surface water observed in Stream 3 appears to be from snowmelt.

Stream 4 originates from a culvert that services stormwater from the northern adjacent residential development. The surface water observed in this feature appears to be from precipitation that drains into the stormwater catch basins within the residential development and then outlets into Stream 4.

In EMH&T's opinion, Stream 2, 3, and 4 would not be considered jurisdictional streams by the USACE since they are not perennial or intermittent tributaries. The State of Ohio considers ephemeral streams waters of the state, and regulates the impact of ephemeral streams under Sections 6111.021 and 6111.03(J)(1) of the Ohio Revised Code.

The Non-Jurisdictional Stormwater Ditch originates from a PVC plastic culvert pipe from the western adjacent apartment complex. The ditch has no ordinary high water mark (OHWM) and was constructed in the uplands to convey/store stormwater runoff. In EMH&T's opinion, the stormwater ditch would not be considered jurisdictional by the USACE.

The Non-Jurisdictional Ephemeral Swale originates from a PVC plastic pipe beneath a gravel road (Bridgeview Drive). This feature has no bed/bank or OHWM. This swale was saturated during the field investigation, but lacked any pools or surface water flow. Given the recent snowmelt, it is evident that this swale does not receive a significant amount of flow even during times of significant snowmelt. In EMH&T's opinion, the swale would not be considered jurisdictional by the USACE since it is not a perennial or intermittent tributary.



Feature ID	Classification/Flow Regime	Wetland (ac)	Stream (If)
Wetland A	Forested/Emergent	0.35	
Wetland B	Forested/Emergent	0.06	
Wetland C	Forested/Emergent	0.32	
Wetland D	Forested	0.01	
Wetland E	Forested/Emergent	0.11	
Wetland F	Forested	0.006	
Stream 1	Perennial		1,972
Stream 2	Ephemeral		666
Stream 3	Ephemeral		502
Stream 4	Ephemeral		117
Stormwater Ditch	Ephemeral		351
Ephemeral Swale	Ephemeral		134
Total		0.856	3,742

TABLE 2 Extent of Onsite Surface Water Features

	TABL	.E 3	
Jurisdictional	Classification of (Onsite Surface	Water Features

Feature ID	TNW	Perennial Tributary	Intermittent Tributary	Ephemeral Tributary	Adjacent Wetland	lsolated Wetland	Non- Jurisdictional Ditch/Swale
Wetland A						Х	
Wetland B						Х	
Wetland C						Х	
Wetland D						Х	
Wetland E						Х	
Wetland F						Х	
Stream 1		Х					
Stream 2				Х			
Stream 3				Х			
Stream 4				Х			
Stormwater							Х
Ditch							
Swale							Х

• TNW: Traditional Navigable Water

• Perennial Tributary: River, stream, or similar surface water channel contributing flow to a TNW continuously year round.

• Intermittent Tributary: River, stream, or similar surface water channel contributing flow to a TNW during certain times of the year, and more than in direct response to precipitation.

• Jurisdictional Impoundment: Standing body of open water contributing surface flow to a water of the U.S., or inundated by flooding from a water of the U.S. in a typical year.

• Adjacent Wetland: Wetlands abutting a water of the U.S., inundated by flooding from a water of the U.S. in a typical year, or separated from a water of the U.S. only by a berm, bank, dike, culvert or similar feature such that the wetland has a direct hydrologic surface connection to a water of the U.S.



4.0 WETLAND HABITAT ASSESSMENT

The Ohio Rapid Assessment Method (ORAM) Version 5 was developed by the Ohio EPA for use in determining wetland quality (OEPA, 2001). The ORAM seeks to determine whether wetlands are rated as Category 1, 2, or 3 based on the State of Ohio Wetland Water Quality Standards adopted in 1998. Category 1 wetlands exhibit limited quality, function, or value. Category 2 wetlands exhibit moderate quality, function, or value; this includes wetlands that have been degraded but have reasonable potential for restoration (Modified Category 2). Category 3 wetlands are wetlands of superior quality, function, or value. The ORAM asks a series of questions regarding wetland functions and characteristics and scores each wetland based on the answers provided. As shown in Table 4, each of the onsite wetlands scored in the Category 1 or 2 Gray Zone to Category 2 range. ORAM scores are potential until confirmed by the Ohio EPA. ORAM dataforms are located in Appendix C.

Feature ID	Туре	Area (ac)	ORAM Score	Wetland Category
Wetland A	Forested/Emergent	0.35	35.5	Modified 2
Wetland B	Forested/Emergent	0.06	32.5	1 or 2 gray zone
Wetland C	Forested/Emergent	0.32	44	Modified 2
Wetland D	Forested	0.01	28.5	1
Wetland E	Forested/Emergent	0.11	44	Modified 2
Wetland F	Forested	0.006	27	1

TABLE 4 Wetland Habitat Assessment Summary

5.0 **REGULATORY JURISDICTION**

Impacts to WOTUS, including jurisdictional streams and wetlands, are regulated by the USACE and the U.S. Environmental Protection Agency (EPA) through Section 404 of the Clean Water Act (33 U.S.C. 1344). Prior to federal authorization for impacts to streams or wetlands, certification must also be obtained from the Ohio EPA as defined in Section 401 of the Clean Water Act (33 U.S.C. 1341). Accordingly, no filling may occur in the potentially jurisdictional wetlands described in this document without appropriate permits and authorization from the USACE and Ohio EPA.

The Ohio EPA regulates discharges of fill to isolated wetlands in the State of Ohio as provided in Sections 6111.021 through 6111.029 of the Ohio Revised Code. Accordingly, no filling may occur in isolated wetlands without an appropriate Isolated Wetland Permit from the state.

6.0 CONCLUSIONS

A routine delineation of Waters of the United States, including streams and wetlands, has been conducted and a report prepared by EMH&T for an approximately 39.8-acre property (KIPP North), located north of Agler Road and west of Golf Green Drive, in the City of Columbus, Franklin County, Ohio. This study was performed at the request of and is for the exclusive use of KIPP Columbus Foundation with an extension of reliance to Vorys, Sater, Seymour and Pease LLP.

The results of the delineation identified one (1) perennial stream, six (6) potentially non-jurisdictional isolated wetlands, three (3) potentially non-jurisdictional ephemeral streams, and one (1) non-jurisdictional ephemeral swale, and one (1) non-jurisdictional ditch within the boundaries of the KIPP North Property. The boundaries and jurisdictional status of the features are potential until verified by the USACE.



7.0 REFERENCES

Flood Emergency Management Agency. FEMA. 2018. Flood Insurance Rate Map for Franklin County, Ohio and Unincorporated Areas. Available from: http://msc.fema.gov/portal.

United States Army Corps of Engineers and Environmental Protection Agency. 2015. Clean Water Rule: Definition of "Waters of the United States", Final Rule. 80 FR 37053. U.S. Government Printing Office, Washington, DC Vol. 80, No. 124, pp. 37054-37127.

United States Department of Agriculture - Natural Resources Conservation Service. USDA-NRCS. 2018. Field Indicators of Hydric Soils in the United States, Version 8.2. Vasilas, L.M., Hurt, G.W., and Berkowitz, J.F. (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

United States Department of Agriculture - Natural Resources Conservation Service. USDA-NRCS. 2015. *National Hydric Soils List by State*. Available online from the website of the Natural Resources Conservation Service: http://soils.usda.gov/use/hydric/.

United States Department of Agriculture - Natural Resources Conservation Service. USDA-NRCS. 2019. NRCS Web Soil Survey. Available online: http://websoilsurvey.nrcs.usda.gov/app/.

United States Department of Agriculture - Soil Conservation Service. USDA-SCS. 2006. Soil Survey of Franklin County, Ohio. Available online: https://www.nrcs.usda.gov/wps/portal/nrcs/ surveylist/soils/survey/state/?stateld=OH

United States Fish and Wildlife Service. (2016). [National Wetlands Inventory Map]. Wetland Map – Franklin County, Ohio. Retrieved from http://www.fws.gov/wetlands/Data/Mapper.html

United States Geological Service. USGS. 1983. Northeast, Ohio Quadrangle, 7.5 minute Series (Topographic). Maps prepared by the U.S. Geological Survey and revised in cooperation with State of Ohio Agencies. For sale from the U.S. Geological Survey, Reston, Virginia 22092.



APPENDIX A:

Investigative Methodology



INVESTIGATIVE METHODOLOGY

Wetlands

According to the Federal Register (1980; 1982), wetlands are defined as Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Potential wetlands located on non-agricultural lands are identified using the 1987 Wetland Delineation Manual (Environmental Laboratory, 1987) for confirmation by the U.S. Army Corps of Engineers (USACE).

Under normal site conditions, all three (3) indicators of jurisdictional wetlands including the presence of hydrophytic macrophytes, hydric soils and certain hydrologic indicators must be identified to meet the criteria for a jurisdictional wetland (Environmental Laboratory, 1987). As such, identification of potential wetlands requires characterization of plant community types, identification of hydric soils, and hydrologic indicators for each community type.

For all potential wetland areas, dominant species in the tree, sapling, shrub, woody vine, and herb layers are determined, in accordance with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region, Version 2.0* (USACE, 2010). Recorded vegetative data consists of herbs with the greatest percentage of aerial cover within 5' of the plot center. Within a 15' radius of the plot center, saplings and shrubs with the greatest height are recorded. Within a 30' radius of the plot center, trees with the largest relative basal area and woody vines with the greatest number of stems are recorded. Species within each of these layers are listed on data forms in order of dominance.

Dominance is determined for each stratum individually. Dominant species include those that comprise 50 percent of the total dominance measure for a stratum, plus any additional species comprising 20 percent or more of the total dominance measure of a stratum. Hydrophytic vegetation is determined to be present when more than 50 percent of the dominants in a sample area are listed as facultative (FAC), facultative wetland (FACW) or obligate wetland (OBL) plants according to Lichvar (2016).

Where possible, soil data are collected by digging a test pit to a maximum depth of 20" to determine the presence of hydric soil. Soil matrix and mottle colors are identified using a Munsell Soil Color Chart (Macbeth, Revised 1994). Evidence of any hydric soil characteristics and evidence of the presence of wetland hydrology are also recorded.

The boundaries of areas that meet all three (3) wetland criteria are identified and measured in the field. Points at which dominant vegetation species changes from wetland to upland, where soils change from hydric to non-hydric, or where indicators of wetland hydrology are no longer observed are noted. The characteristics of each community type are recorded on dataforms and sample points are chosen to represent both an identified potential wetland and its surrounding upland community. All potential wetlands delineated in the field are marked with flagging and mapped using a Trimble GeoXH GPS unit. The dominant vegetation, soils, and indicators of wetland hydrology are described on delineation forms. Wetland communities are classified according to the classification scheme of Cowardin et al. (1979).

Wetlands are further classified using the Ohio Rapid Assessment Method (ORAM) Version 5 (OEPA, 2001). The ORAM seeks to determine whether wetlands are rated as Category 1, 2, or 3 based on the State of Ohio Wetland Water Quality Standards. Category 1 wetlands exhibit limited quality, function, or value. Category 2 wetlands exhibit moderate quality, function, or value; this includes wetlands that have been degraded but have reasonable potential for restoration (Modified Category 2). Category 3 wetlands are wetlands of superior quality, function, or value.



Streams

The centerline of the streams are mapped for their entire length found on-site using a Trimble[®] GPS unit. Ordinary High Water Marks (OHWM), which define the outermost regulatory boundaries of streams and open waters, are flagged and mapped using the GPs unit.

Streams are classified as ephemeral, intermittent, or perennial based on site observations, and are assigned a regulatory classification according to the most recent USACE guidance. Streams are also assessed using the Ohio EPA's Qualitative Habitat Evaluation Index (QHEI) and/or Headwater Habitat Evaluation Metric (HHEI). Assessment locations are placed in representative reaches of the streams within the assessment area.

The QHEI is used for streams with drainage areas greater than one square mile and pools with maximum water depths greater than 15.75 in (40 cm) (Ohio EPA 2006). QHEI scoring is based on substrate types, instream cover, channel morphology, riparian quality and bank erosion, pool/glide and riffle/run quality, and gradient. These metrics reflect stream habitat features that are correlated with the potential to attain the aquatic life use designation for Ohio streams.

Streams that do not meet these requirements are assessed using the HHEI (Ohio EPA, 2012). HHEI scoring is based on three (3) parameters that are associated with habitat quality in small headwater streams: substrate type, maximum pool depth and bankfull width. Using the HHEI scoring system, streams may be categorized as Ephemeral Aquatic Streams (modified/natural channel), Small Drainage Warm Water Streams (modified/natural channel), and Spring Water Streams. Spring Water Streams represent high quality, cold water streams, Small Drainage Warm Water Streams represent warm water streams, and Ephemeral Aquatic Streams (seasonally dry) with limited ecological function.

Open Water Habitat

The boundaries of open water systems (ponds and lakes) are delineated either using recent aerial photography or by flagging boundaries in the field and locating them using a GPS unit.

REFERENCES

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. US Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. 100 pp. and appendices.

Federal Register. 1980. 40 CFR Part 230: Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material. U.S. Government Printing Office, Washington, DC Vol. 45, No. 249, pp. 85352-3.

Federal Register. 1982. Title 33: Navigation and Navigable Waters; Chapter II, Regulatory programs of the Corps of Engineers. U.S. Government Printing Office, Washington, DC Vol. 47, No. 138, p31810.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.

Macbeth. Revised 1994. *Munsell Soil Color Charts*. Macbeth, division of Lollmorgen Instruments Corp., P.O. Box 230, Newburgh, New York 12551-0230.

Ohio Environmental Protection Agency. February 1, 2001. Ohio Rapid Assessment Method for Wetlands v.5.0. Available online: http://epa.ohio.gov/portals/35/401/oram50um_s.pdf.

Ohio Environmental Protection Agency. 2006. Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI). Ohio EPA Technical Bulletin EAS/2006-06-01. Columbus, Ohio:



Ohio EPA, Division of Surface Water. Available online: http://www.epa.state.oh.us/portals/35/documents/qheimanualjune2006.pdf

Ohio Environmental Protection Agency. 2018. Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams (Version 4.0). Ohio Environmental Protection Agency, Division of Surface Water, Columbus, Ohio. Available online: <u>https://www.epa.state.oh.us/Portals/35/rules/PHWHManual 2018 Ver 4%200 10-22-18.pdf</u>

U. S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center. Available online at: http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramand Permits/reg_supp.aspx



APPENDIX B:

USACE Wetland and Upland Dataforms

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Kipp North					City/County: Franklin County						Sampling Date:	3/5/2020	
Applicant/Owner:	Mavnard					<u></u>		ooun	State:	OF	1	Sampling Point:	Wetland A
Investigator(s): Brvar	nvestigator(s): Brvan Lombard						nip. Rar	nae:	T1N R	17W		espg r e	
Landform (hillside, te	errace, etc.)	Plain			- ,	Local r	relief (c	oncav	e, conv	vex, no	one): (Concave	
Slope (%): 3	Lat: 40.0	27759			Long:	-82.942	2941				,	Datum:	
Soil Map Unit Name:	Benningto	n silt loam,	, 2 to 6 p	ercent slopes					I	NWI c	lassifi	cation: No	
Are climatic / hydrolo	gic conditio	ons on the	site typic	al for this time of ye	ear?	Yes	Х	No		(lf no	o, expl	ain in Remarks.)	
Are Vegetation N	, Soil <u>N</u>	, or Hydr	ology N	lo significantly dist	turbed?	Are "No	ormal C	ircum	stances	s" pres	sent?	Yes <u>X</u> N	lo
Are Vegetation N	, Soil <u>N</u>	, or Hydr	ology_N	lo_naturally proble	matic?	(If need	led, exp	olain a	iny ans	wers i	in Ren	narks.)	
SUMMARY OF I	FINDING	S – Atta	ch site	map showing	sampli	ing poi	int loo	catio	ns, tr	anse	ects,	important fea	atures, etc.
Hydrophytic Vegeta	tion Preser	t? Yes	х	No	ls th	ne Samp	oled Ar	ea					
Hydric Soil Present	?	Yes	Х	No	with	nin a We	tland?		•	Yes_	х	No	
Wetland Hydrology	Present?	Yes	Х	No									
Remarks:													

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Demission Technologie				
<u>Tree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species?	Status	Dominance Test worksneet:				
		Yes		Number of Dominant Species That				
2. Fraxinus pennsylvanica	20	Yes	FACW	Are OBL, FACW, or FAC: 6 (A)				
3. Acer negundo	10	NO	FAC	Total Number of Dominant Species				
4		·		Across All Strata: <u>6</u> (B)				
5				Percent of Dominant Species That				
	55	=Total Cover		Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)				
Sapling/Shrub Stratum (Plot size: 15')								
1. Cornus sp.	30	Yes	FACW	Prevalence Index worksheet:				
2. Acer negundo	15	Yes	FAC	Total % Cover of: Multiply by:				
3. Rosa multiflora	10	No	FACU	OBL species 25 x 1 = 25				
4				FACW species 60 x 2 = 120				
5				FAC species 85 x 3 = 255				
	55	=Total Cover		FACU species 10 x 4 = 40				
Herb Stratum (Plot size: 5')				UPL species 2 x 5 = 10				
1. Elymus sp.	30	Yes	FAC	Column Totals: 182 (A) 450 (B)				
2. Daucus carota	2	No	UPL	Prevalence Index = B/A = 2.47				
3. Lysimachia nummularia	10	No	FACW					
4. Poa sp.	30	Yes	FAC	Hydrophytic Vegetation Indicators:				
5.				1 - Rapid Test for Hydrophytic Vegetation				
6.				X 2 - Dominance Test is >50%				
7.				X 3 - Prevalence Index is $\leq 3.0^{1}$				
8.				4 - Morphological Adaptations ¹ (Provide supporting				
9		·		data in Remarks or on a separate sheet)				
10.		·		Problematic Hydrophytic Vegetation ¹ (Explain)				
	72	=Total Cover		¹ Indicators of hydric coil and wattend hydrology must				
Woody Vine Stratum (Plot size: 15')				be present, unless disturbed or problematic.				
1				Hydrophytic				
2.				Vegetation				
		=Total Cover		Present? Yes X No				
Remarks: (Include photo numbers here or on a separate sheet.)								
Deptil	IMALITA		Redo	x Featur	63			
---	--	--	--	---	--	-------------------------------------	-----------------------------------	--
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 2/2	100						Clay
3-9	10YR 3/2	95	10YR 4/6	5	С	М		Prominent redox concentrations
9-12	10YR 4/2	80	10YR 4/6	20	С	М		Prominent redox concentrations
Type: C=C	oncentration, D=Dep	pletion, RM	=Reduced Matrix, I	NS=Mas	ked Sand	d Grains	a. ² Locatio	n: PL=Pore Lining, M=Matrix.
Histosol			Sandy Gle	wed Mat	riv (S4)		Indicato	ors for Problematic Hydric Solls :
Histic Fr	(-1)		Sandy Re	dox (S5)	IIX (04)		lron	Manganese Masses (F12)
Black Hi	stic (A3)	Stripped M	Aatriv (SP	3)		Itoh	Parent Material (F21)	
Hydroge	suc $(A3)$ on Sulfide $(A4)$	Dark Surf	auix (00)			v Shallow Dark Surface (E22)	
riyuruye Stratifica	A Javers (A5)			aral (E1)			er (Evolain in Domarka)	
	a Layers (A3) lok (A10)			ony WIII	-rai (F1)		Oth	ei (∟λριαπ πι Remaiks)
	IUR (AIU) A Rolow Dark Surf	0 (11)		Jotriv (F	uix (F∠) 2)			
Depieted	a Below Dark Surfac		vialitix (F	о))		³ Indiaate	are of hydrophytic vegetation and	
THICK Da	Ark Surface (ATZ)			TK Suriac	е (го) face (Г7)	、 、	Indicate	land hydrology must be present
	iucky Mineral (ST)	2)		Jark Sur)	wei	iand nydrology must be present,
5 cm Mu	icky Peat of Peat (5.	3)		pression	s (F8)		unie	ess disturbed or problematic.
Restrictive	Layer (if observed)	:						
Restrictive	Layer (if observed) N/A	:						
Restrictive Type: Depth (ir Remarks:	Layer (if observed) N/A nches):	: 					Hydric Soil Prese	nt? Yes <u>X</u> No
Restrictive Type: Depth (ir Remarks:	Layer (if observed) N/A nches):						Hydric Soil Prese	nt? Yes <u>X</u> No_
Restrictive Type: Depth (ir Remarks:	Layer (if observed) N/A nches):	: 					Hydric Soil Prese	nt? Yes <u>X</u> No_
Restrictive Type: Depth (ir Remarks: IYDROLO Wetland Hy	Layer (if observed) N/A nches): OGY drology Indicators:	: 					Hydric Soil Prese	nt? Yes <u>X</u> No_
Restrictive Type: Depth (ir Remarks: HYDROLC Wetland Hy Primary India	Layer (if observed) N/A nches): OGY drology Indicators: cators (minimum of c	one is requ	ired; check all that	apply)			Hydric Soil Preser	nt? Yes X No
Restrictive Type: Depth (ir Remarks: IYDROLC Wetland Hy Primary India X Surface	Layer (if observed) N/A nches): OGY drology Indicators: cators (minimum of c Water (A1)	one is requ	ired; check all that	apply) ined Lea	ves (B9)		Hydric Soil Preser	nt? Yes X No
Restrictive Type: Depth (ir Remarks: IYDROLC Wetland Hy Primary India X Surface X High Wa	Layer (if observed) N/A nches): OGY drology Indicators: cators (minimum of o Water (A1) ater Table (A2)	one is requ	ired; check all that X Water-Sta	apply) ined Lea auna (B1	ves (B9) 3)		Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10)
Restrictive Type: Depth (ir Remarks: HYDROLO Wetland Hy Primary India X Surface X High Wa X Saturatio	Auger (if observed) N/A nches): DGY drology Indicators: cators (minimum of of Water (A1) tter Table (A2) on (A3)	one is requ	ired; check all that X Water-Sta Aquatic Fa	apply) ined Lea auna (B1	ves (B9) 3) s (B14)		Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2)
Restrictive Type: Depth (ir Remarks: IYDROLC Wetland Hy Primary India X Surface X High Wa X Saturatio X Water M	Auger (if observed) N/A Nches): DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) larks (B1)	pne is requ	ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen	apply) ined Lea auna (B1 atic Plant Sulfide (ves (B9) 3) s (B14) Ddor (C1)	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8)
Restrictive Type: Depth (ir Remarks: HYDROLC Wetland Hy Primary India X Surface X High Wa X Saturatio X Water M X Sedimer	Layer (if observed) N/A nches): OGY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)	one is requ	ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	apply) ined Lea auna (B1 titic Plant Sulfide (Rhizosph	ves (B9) 3) s (B14) Ddor (C1 eres on l) Living R	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)
Restrictive Type: Depth (ir Remarks: TYDROLC Vetland Hy Primary India X Surface X High Wa X Saturatio X Water M X Sedimer X Drift Dep	Layer (if observed) N/A nches): OGY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)	ne is requ	ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence	apply) ined Lea auna (B1 titic Plant Sulfide (Rhizosph of Reduc	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron () Living R (C4)	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)
Restrictive Type: Depth (ir Remarks: TYDROLC Wetland Hy Primary India X Surface X High Wa X Saturatic X Water M X Saturatic X Water M X Sedimer X Drift Dep Algal Ma	Auger (if observed) N/A nches): DGY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) arkite (DE)	one is requ	ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc	apply) ined Lea auna (B1 auna (B1 Sulfide (Rhizosph of Reduc	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (Q2)) Living R (C4) Illed Soil	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)
Restrictive Type: Depth (ir Remarks: HYDROLC Wetland Hy Primary India X Surface X High Wa X Surface X High Wa X Saturatio X Water M X Sedimer X Drift Dep Algal Ma Iron Dep	Auger (if observed) N/A nches): DGY drology Indicators: cators (minimum of of Water (A1) tter Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	one is requ	ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irco Thin Muck	apply) ined Lea auna (B1 auna (B1 sulfide (Rhizosph of Reduc on Reduc s Surface	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7)) Living R (C4) Iled Soil	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Restrictive Type: Depth (ir Remarks: IYDROLC Wetland Hy Primary India X Surface X High Wa X Saturatio X Saturatio X Saturatio X Drift Dep Algal Ma Iron Dep Inundatio	Auger (if observed) N/A nches): DGY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial I	one is requ	ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or	apply) ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (ction in Ti c(C7) a (D9)) Living R (C4) Iled Soil	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Restrictive Type: Depth (ir Remarks: IYDROLC Wetland Hy Primary India X Surface X High Wa X Saturatic X Water M X Sedimer X Drift Dep Algal Ma Iron Dep Inundatic Sparsely	Agyer (if observed) N/A Nches): DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial I r Vegetated Concave	nagery (B	ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 sulfide (Rhizosph of Reduc n Reduc s Surface Well Dat plain in F	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) Remarks)) Living R (C4) Iled Soil	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Restrictive Type: Depth (ir Remarks: TYDROLC Wetland Hy Primary India X Surface X High Wa X Saturatic X Water M X Sedimer X Drift Dep Algal Ma Iron Dep Inundatio Sparsely	Auger (if observed) N/A nches): DGY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) oosits (B3) at or Crust (B4) oosits (B3) on Visible on Aerial I v Vegetated Concave vations:	magery (B	ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc s Surface Well Dat blain in F	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti c(C7) a (D9) Remarks)) Living R (C4) Illed Soil	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Restrictive Type: Depth (ir Remarks: TYDROLC Wetland Hy Primary India X Surface X High Wa X Surface X High Wa X Saturatio X Water M X Sedimer X Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat	Auger (if observed) N/A N/A nches): OGY drology Indicators: cators (minimum of of Water (A1) tter Table (A2) on (A3) larks (B1) nt Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial I / Vegetated Concave vations: rer Present? Ye	magery (B Surface (Surface (ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 sulfide (Rhizosph of Reduc sulfide (Rhizosph of Reduc sulfide (Sulfide (Rhizosph of Reduc sulfide (Sulfide	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) Remarks) cemarks)) Living R (C4) Iled Soil	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Restrictive Type: Depth (ir Remarks: HYDROLO Wetland Hy Primary India X Surface X High Wa X Saturatio X Saturatio X Saturatio X Saturatio X Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat	Auger (if observed) N/A N/A nches): DGY drology Indicators: cators (minimum of of Water (A1) tter Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial I (Vegetated Concave vations: ter Present? Ye Present? Ye	magery (B e Surface (es X es X	ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp No	apply) ined Lea auna (B1 auna (B1 sulfide (Rhizosph of Reduc n Reduc s Surface Well Dat blain in F Depth (i Depth (i	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti ced Iron (tion (tion tion tion (tion tion tion tion (tion tion tion tion tion tion tion tion) Living R (C4) Illed Soil	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Restrictive Type: Depth (ir Remarks: HYDROLC Wetland Hy Primary India X Surface X High Wa X Surface X High Wa X Saturatio X Water M X Sedimer X Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P	Auger (if observed) N/A N/A nches): DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) bosits (B3) at or Crust (B4) bosits (B5) on Visible on Aerial I / Vegetated Concave vations: ter Present? Ye Present? Ye resent? Ye	magery (B e Surface (es X es X es X	ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp No No No	apply) ined Lea auna (B1 titc Plant Sulfide (Rhizosph of Reduc n Reduc s Surface Well Dat blain in F Depth (i Depth (i	ves (B9) 3) s (B14) Odor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) eemarks) a (D9) eemarks):) Living R (C4) Iled Soil	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Restrictive Type: Depth (ir Remarks: IYDROLC Wetland Hy Primary India X Surface X High Wa X Saturatio X Saturatio X Vater M X Sedimer X Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap	Auger (if observed) N/A N/A nches): DGY drology Indicators: cators (minimum of content water (A1) ater Table (A2) on (A3) larks (B1) at or Crust (B4) oosits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial I / Vegetated Concave vations: ter Present? Present? Ye pillary fringe)	magery (B es <u>X</u> es <u>X</u>	ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp No No No	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in F Depth (i Depth (i	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) Remarks) a (D9) nches): nches):) Living R (C4) Illed Soil	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) pmorphic Position (D2) C-Neutral Test (D5) bgy Present? Yes X No
Restrictive Type: Depth (ir Remarks: IYDROLC Wetland Hy Primary India X Surface X High Wa X Saturatio X Saturatio X Water M X Sedimer X Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wate Water Table Saturation P (includes can Describe Re	Auger (if observed) N/A N/A nches): DGY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial I v Vegetated Concave vations: rer Present? Ye Present? Ye pillary fringe) corded Data (stream	magery (B e Surface (es X es X es X es X	ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp No No No No No No No No No No	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat blain in F Depth (i Depth (i Depth (i	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) Remarks) a (D9) Remarks):) Living R (C4) Illed Soil	Hydric Soil Preser	nt? Yes X No ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5) bgy Present? Yes X No

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Kipp North	City/County: Franklin Cou	unty	Sampling Date:	3/5/2020			
Applicant/Owner: Maynard		State: OH	Sampling Point:	Upland A			
Investigator(s): Bryan Lombard	Section, Township, Range:	T1N R17W					
Landform (hillside, terrace, etc.): Plain	Local relief (conc	ave, convex, none):	Covex				
Slope (%): 8 Lat: 40.027759	Long: -82.942941		Datum:				
Soil Map Unit Name: Bennington silt loam, 2 to 6 percent slopes		NWI classi	fication: No				
Are climatic / hydrologic conditions on the site typical for this tim	e of year? Yes <u>X</u> N	o (If no, ex	plain in Remarks.)				
Are Vegetation N , Soil N , or Hydrology No significant	ly disturbed? Are "Normal Circu	mstances" present?	Yes <u>X</u> N	o			
Are Vegetation N, Soil N, or Hydrology No naturally p	oroblematic? (If needed, explair	any answers in Re	marks.)				
SUMMARY OF FINDINGS – Attach site map show	ving sampling point locat	ions, transects	, important fea	atures, etc.			
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X	Is the Sampled Area within a Wetland?	Is the Sampled Area within a Wetland? Yes <u>No X</u>					
Remarks:	•						
VEGETATION – Use scientific names of plants.							
Tree Stratum (Plot size: 30') Absolut	e Dominant Indicator er Species? Status D	ominance Test wo	rksheet:				
1. Fraxinus pennsylvanica 35 2.	<u>Yes</u> <u>FACW</u> N A	umber of Dominant e OBL, FACW, or F	Species That FAC:	<u>1 (</u> A)			
3	To	otal Number of Dom cross All Strata:	inant Species	3 (B)			

1 Lonicera sp			70	Yes	FACU	Prevalence Index worksheet:			
2.	2.					Total % Cover of:		Mulf	
3.							OBL species	0	x 1 =
4.							FACW species	35	x 2 =
5.							FAC species	0	x 3 =
				70	=Total Cover		FACU species	85	x 4 =
Herb Stratum	(Plot size:	5')		_		UPL species	0	x 5 =
1							Column Totals:	120	(A)
2.							Prevalence Ind	ex = B/.	A = 3
3.									
4.							Hydrophytic Veg	etation	Indicators:
5.							1 - Rapid Tes	t for Hyc	drophytic Ve
6.							2 - Dominanc	e Test is	\$ >50%
7.							3 - Prevalenc	e Index i	s ≤3.0 ¹
8.							4 - Morpholog	jical Ada	ptations ¹ (P
9.							data in Rer	narks or	on a separa
							1		

15'

)

(Plot size:

(Plot size:

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

15'

35

=Total Cover

=Total Cover

Yes

=Total Cover

FACU

Hydrophytic

Vegetation

Present?

15

15

5.

8. 9. 10

2.

Woody Vine Stratum

1. Vitis sp.

Sapling/Shrub Stratum

3	3 - Prevalence Index is ≤3.0 ¹
4	4 - Morphological Adaptations ¹ (Provide supporting
	data in Remarks or on a separate sheet)
	Duch low of its I hadron had its Monototion ¹ (Evaluits)

1 - Rapid Test for Hydrophytic Vegetation

Percent of Dominant Species That Are OBL, FACW, or FAC:

Probl	ematic	; нуа	iropny	tic \	vege	tatio	n	(Exbi	ain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Yes	No	Х

33.3% (A/B)

Multiply by:

0

70

0

340

0

410

3.42

(B)

Profile Des	scription: (Describe	to the dept	h needed to doc	ument th	ne indica	ator or c	onfirm the	absence o	f indicato	ors.)		
Ueptri (inches)	Color (moist)		Color (moist)	X Feature	es Type ¹	1 oc^2	Text			Remark	-	
0_6	10VP 3/2			70	-16-		10/1			Clay	,	—
0-0	101K 3/2									Clay		—
6-12	10YR 3/3	100										
				. <u> </u>								
				<u> </u>			_					
												—
¹ Type: C=	Concentration, D=Dep	letion, RM=	Reduced Matrix, N	VS=Mask	ked Sand	Grains		² Location:	PL=Pore	Lining, M=Ma	atrix.	_
Hydric Soi	il Indicators:							Indicators	for Prob	lematic Hydr	ic Soils ³ :	
Histoso	ol (A1)		Sandy Gle	yed Matr	ix (S4)			Coast	Prairie Re	edox (A16)		
Histic E	Epipedon (A2)		Sandy Ree	dox (S5)				Iron-N	langanese	e Masses (F12	2)	
Black H	Histic (A3)		Stripped M	/latrix (S6	<i>i</i>)			Red P	arent Mat	erial (F21)		
Hydrog	gen Sulfide (A4)		Dark Surfa	ace (S7)			Very Shallow Dark Surface (F22)					
Stratifie	ed Layers (A5)		Loamy Mu	ucky Mine	ral (F1)			Other	(Explain i	n Remarks)		
2 cm N	/luck (A10)		Loamy Gle	eyed Mati	rix (F2)							
Deplete	ed Below Dark Surface	e (A11)	Depleted N	Matrix (F3	3)			-				
Thick E	Dark Surface (A12)		Redox Da	rk Surface	e (F6)			³ Indicators	of hydrop	ohytic vegetati	ion and	
Sandy	Mucky Mineral (S1)		Depleted [Dark Surf	ace (F7)		wetland hydrology must be present,					
5 cm N	/lucky Peat or Peat (S3	3)	Redox De	pressions	3 (F8)		unless disturbed or problematic.					
Restrictive	e Layer (if observed):	:										
Type:	N/A											
Depth	(inches):						Hydric So	il Present	?	Yes	No>	(
Remarks:												
HYDROL	.OGY											
Wetland H	lydrology Indicators:											
Primary Inc	dicators (minimum of o	one is requir	ed; check all that	apply)				Secondary	/ Indicator	<u>'s (minimum o</u>	f two require	:d)
Surface Water (A1) Wat				Water-Stained Leaves (B9)				Surface Soil Cracks (B6)				
High W	Vater Table (A2)		Aquatic Fa	auna (B13	3)			Draina	age Patter	ns (B10)		
Saturat	tion (A3)		True Aqua	itic Plants	s (B14)			Dry-S	eason Wa	iter Table (C2))	
Water	Marks (B1)		Hydrogen	Sulfide U)dor (C1))		Crayfi	sh Burrow	/s (C8)	()	
Sedime	ent Deposits (B2)		Oxidized F	Rhizosphe	eres on L	_iving Ro	oots (C3)	Satura	ation Visib	le on Aerial In	nagery (C9)	
Drift De	eposits (B3)		Presence	of Reduc	ed Iron (C4)	/ 	Stunte	ed or Stres	ssed Plants (L)1)	
Algal M	Лat or Crust (B4)		Recent Irc	on Reduct	tion in Ti	Iled Soil	s (C6) Geomorphic Position (D2)					

Algal Mat or Crust (B4)		F	Recent	Iron Reduction in Tilled	Soils (C6)	Geomorphic Position (D2)			ļ
Iron Deposits (B5)		۳	Րhin Mւ	uck Surface (C7)		FAC-Neutral Test (D5)			ļ
Inundation Visible on A	erial Imagery (B7)	(Gauge (or Well Data (D9)					ļ
Sparsely Vegetated Cor	ncave Surface (B	3)(Other (F	Explain in Remarks)					
Field Observations:									
Surface Water Present? Yes		No	Х	Depth (inches):					l
Water Table Present?	Yes	No	Х	Depth (inches):					
Saturation Present?	Yes	No	Х	Depth (inches):	Wetlan	d Hydrology Present?	Yes	No	Х
(includes capillary fringe)					_				
Describe Recorded Data (st	tream gauge, mor	itoring	well, ac	rial photos, previous in:	spections), if av	ailable:			
Remarks:									

Project/Site: Kipp No	roject/Site: Kipp North					klin Cou	nty		Sampling Date:	3/5/2020
Applicant/Owner:	KIPP						State:	ОН	Sampling Point:	Wetland B
Investigator(s): Bryar	n Lombard			Section, T	ownship,	Range:	T1N R	17W		
Landform (hillside, te	errace, etc.): Pl	ain		L	ocal relie	f (conca	ve, conv	ex, none):	Concave	
Slope (%): 7	Lat: 40.0301	83		Long: -8	2.944290)			Datum:	
Soil Map Unit Name:	Cardington s	ilt loam, 2 to 6 g	percent slopes				1	WI classi	fication: No	
Are climatic / hydrolo	ogic conditions	on the site typic	al for this time of y	ear?	/es <u>X</u>	No)	(If no, ex	olain in Remarks.)	
Are Vegetation N	, Soil <u>N</u> , c	r Hydrology <u>N</u>	o significantly dist	urbed? A	re "Norm	al Circun	nstances	" present?	Yes <u>X</u> No)
Are Vegetation N	, Soil <u>N</u> , c	r Hydrology N	o_naturally proble	matic? (I	needed,	explain	any ans	wers in Re	marks.)	
SUMMARY OF	FINDINGS -	Attach site	map showing	samplin	g point	locatio	ons, tr	ansects	, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No			Is the within	Samplec a Wetla	l Area nd?	١	fes <u>X</u>	No		
Wetland Hydrology	Present?	Yes X	No							
Remarks:										
VEGETATION -	Use scientif	ic names of	plants.							

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance Test worksheet:
1. Acer saccharinum	30	Yes	FACW	Number of Dominant Species That
2. Fraxinus pennsylvanica	5	No	FACW	Are OBL, FACW, or FAC: 6 (A)
3. Ulmus americana	15	Yes	FACW	Total Number of Dominant Species
4				Across All Strata: 7 (B)
5				Percent of Dominant Species That
	50	=Total Cover		Are OBL, FACW, or FAC: <u>85.7%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 15')		-		
1. Fraxinus pennsylvanica	30	Yes	FACW	Prevalence Index worksheet:
2. Acer saccharinum	15	Yes	FACW	Total % Cover of: Multiply by:
3. Rosa multiflora	15	Yes	FACU	OBL species 0 x 1 = 0
4. Ligustrum sp.	10	No	FAC	FACW species 185 x 2 = 370
5. Lonicera sp.	5	No	FAC	FAC species 30 x 3 = 90
	75	=Total Cover		FACU species 15 x 4 = 60
Herb Stratum (Plot size: 5')		•		UPL species $0 x 5 = 0$
1. Cinna arundinacea	75	Yes	FACW	Column Totals: 230 (A) 520 (B)
2. Polygonum sp.	15	No	FACW	Prevalence Index = $B/A = 2.26$
3. Aster sp.	10	No	FAC	
4.				Hydrophytic Vegetation Indicators:
5.				1 - Rapid Test for Hydrophytic Vegetation
6.				X 2 - Dominance Test is >50%
7.		·		X 3 - Prevalence Index is ≤3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide supporting
9.		·		data in Remarks or on a separate sheet)
10.		·		Problematic Hydrophytic Vegetation ¹ (Explain)
	100	=Total Cover		¹ Indicators of hydric coil and watend hydrology must
Woody Vine Stratum (Plot size: 15')				be present, unless disturbed or problematic.
1. Toxicodendron radicans	5	Yes	FAC	Lludranhutia
2.		·		Hydrophytic Vegetation
	5	=Total Cover		Present? Yes X No
Remarks: (Include photo numbers here or on a separa	ate sheet.)			

SOIL	
------	--

Depth	Matrix		Read	x realun	63						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture			Remarks	
0-3	10YR 3/2	90	10YR 4/6	10	С	М				Clay	
3-6	10YR 4/2	90	10YR 4/6	10	С	М			Prominer	nt redox concen	trations
6-12	10YR 4/2	85	10YR 4/6	15	C	М			Prominer	nt redox concen	trations
0.12	1011(4/2		1011(4/0						Troninio		trations
				·							
		<u> </u>		·							
				·							
Type: C=Co	ncentration, D=Depl	etion, RM	=Reduced Matrix, I	MS=Masl	ked Sand	d Grains.	2Lo	ocation:	PL=Pore Lir	ning, M=Matrix.	
Hydric Soli I	ndicators:		Sandy Cl	wood Mot			Inc	Cooot	Tor Probler	matic Hydric S	
Histosol ((A1) inadan (A2)		Sandy Gie	eyed Mati	fix (54)			_ Coast	Prairie Redo	DX (A16)	
Block His	tic (A2)		Sandy Re	UUX (35) Antrix (Se	2)				anganese M aront Matori	(E21)	
	Sulfido ($\Lambda 4$)		Supped in	nallix (30)				alent Materia	al (FZI) Surface (E22)	
inyuruger				ace (37) Joky Mine	aral (E1)				(Evolain in P	Comarke)	
2 cm Mur	rk (A10)			oved Mat	rix (F2)				(∟∧piaiii iii R	(ciliai Ko)	
2 cm which Depleted	Below Dark Surface	(A11)	X Depleted	Matrix (F	3)						
Thick Da	rk Surface (A12)	(****)	Redox Da	rk Surfac	-, e (F6)		³ In	dicators	of hydrophy	tic vegetation a	nd
Sandy M	ucky Mineral (S1)		Depleted	Dark Sur	face (F7))		wetlan	d hydrology	must be preser	nt,
5 cm Muc	cky Peat or Peat (S3	Redox De	pression	s (F8)	,	unless disturbed or problematic.					
Restrictive L	aver (if observed):										
Type:	N/A										
Type: Depth (in	N/A ches):						Hydric Soil P	resent?		Yes X	No
Type: _ Depth (in Remarks:	N/A ches):						Hydric Soil P	resent?		Yes <u>X</u>	No
Type: Depth (in Remarks:	N/A ches):						Hydric Soil P	resent?		Yes X	No
Type: Depth (in Remarks: HYDROLO	N/A ches):						Hydric Soil P	resent?		Yes <u>X</u>	No
Type: Depth (in Remarks: HYDROLO Wetland Hyd Primary Indic	N/A ches): GY Irology Indicators: ators (minimum of o	ne is requ	ired; check all that	apply)			Hydric Soil P	condary	Indicators (i	Yes X	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1)	ne is requ	ired; check all that Water-Sta	apply)	ves (B9)		Hydric Soil P	condary Surfac	Indicators (r	Yes X minimum of two	No
Type: Depth (in Remarks: HYDROLO Wetland Hyd Primary Indic Surface V X_ High Wat	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2)	ne is requ	ired; check all that Water-Sta Aquatic Fa	apply) iined Lea auna (B1	ves (B9) 3)		Hydric Soil P	condary Surfac Draina	Indicators (i e Soil Crack ge Patterns	Yes X minimum of two (s (B6) (B10)	No
Type: Depth (in Remarks: HYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) rer Table (A2) n (A3)	ne is requ	ired; check all that Water-Sta Aquatic Fa	apply) ained Lea auna (B1 atic Planta	ves (B9) 3) s (B14)		Hydric Soil P	condary Surfac Draina Dry-Se	Indicators (r e Soil Crack ge Patterns eason Water	Yes X minimum of two is (B6) (B10) • Table (C2)	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturatiou X Water Ma	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) rer Table (A2) n (A3) arks (B1)	ne is requ	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen	apply) iined Lea auna (B1 atic Plant: Sulfide (ves (B9) 3) s (B14) Ddor (C1)	Hydric Soil P	condary Surfac Draina Dry-Se Crayfis	Indicators (e Soil Crack ge Patterns eason Water sh Burrows (Yes X minimum of two ts (B6) (B10) • Table (C2) C8)	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2)	ne is requ	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized f	apply) ined Lea auna (B1 atic Planta Sulfide C Rhizosph	ves (B9) 3) s (B14) Ddor (C1 eres on) Living Ro	Hydric Soil P	condary Surfac Draina Dry-Se Crayfis Satura	Indicators (e Soil Crack ge Patterns eason Water sh Burrows (tion Visible (Yes X minimum of two (ss (B6) (B10) • Table (C2) C8) on Aerial Image	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Dept	N/A ches): GY Irology Indicators: ators (minimum of o Water (A1) rer Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3)	ne is requ	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized f Presence	apply) nined Lea auna (B1 atic Planta Sulfide C Rhizosph of Reduc	ves (B9) 3) s (B14) Ddor (C1 eres on b ced Iron o) Living Rc (C4)	Hydric Soil P	condary Surfac Draina Dry-Se Crayfit Satura Sturte	Indicators (r e Soil Crack ge Patterns eason Water sh Burrows (r tion Visible o d or Stresse	Yes X minimum of two rs (B6) (B10) • Table (C2) C8) on Aerial Image ed Plants (D1)	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Depo Algal Mat	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	ne is requ	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized fa Presence Recent Irc	apply) ained Lea auna (B1 atic Planta Sulfide C Rhizosph of Reduc	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron tion in Ti) Living Rc (C4) illed Soils	Hydric Soil P	condary Surfac Draina Dry-Se Crayfie Satura Sturte Com	Indicators (r e Soil Crack ge Patterns eason Water sh Burrows (r tion Visible of d or Stresse orphic Positi	Yes X minimum of two (B10) Table (C2) C8) on Aerial Image on Aerial Image on (D2)	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo	N/A ches): GY frology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) osits (B5)	ne is requ	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized f Presence Recent Iro Thin Muck	apply) ined Lea auna (B1 atic Plant: Sulfide (Rhizosph of Reduc on Reduc c Surface	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron tion in Ti (C7)) Living Rc (C4) illed Soils	Hydric Soil P	condary Surfac Draina Dry-Se Crayfis Satura Stunte Geom FAC-N	Indicators (e Soil Crack ge Patterns eason Water sh Burrows (tion Visible o d or Stresse orphic Positi leutral Test (Yes X minimum of two ts (B6) (B10) • Table (C2) C8) on Aerial Image ed Plants (D1) on (D2) (D5)	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) n Visible on Aerial Ir	ne is requ	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	apply) ined Lea auna (B1 atic Plant: Sulfide C Rhizosph of Reduc on Reduc c Surface Well Dat:	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9)) Living Rc (C4) illed Soils	Hydric Soil P	condary Surfac Draina Dry-Se Crayfis Satura Sturte Geom FAC-N	Indicators (e Soil Crack ge Patterns eason Water sh Burrows (tion Visible o d or Stresse orphic Positi leutral Test (Yes X minimum of two rs (B6) (B10) Table (C2) C8) on Aerial Image ed Plants (D1) on (D2) (D5)	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave	ne is requ nagery (B' Surface (i	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Ex	apply) ained Lea auna (B1 atic Planta Sulfide (Rhizosph of Reduc on Reduc c Surface Well Data plain in R	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron tion in Ti (C7) a (D9) eemarks)) Living Rc (C4) illed Soils	Hydric Soil P	condary Surfac Draina Dry-Se Crayfis Satura Sturte Geom FAC-N	Indicators (r e Soil Crack ge Patterns eason Water sh Burrows (r tion Visible of d or Stresse orphic Positi leutral Test (Yes X minimum of two (B10) Table (C2) C8) on Aerial Image ed Plants (D1) on (D2) (D5)	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ	N/A ches): GY frology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave vations: atom of the second seco	ne is requ nagery (B Surface (I	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 atic Plant: Sulfide C Rhizosph of Reduc con Reduc con Reduc con Reduc con Reduc con Reduc	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) temarks)) Living Rc (C4) illed Soils	Hydric Soil P	condary Surfac Draina Dry-Se Crayfis Satura Stunte Geom FAC-N	Indicators (e Soil Crack ge Patterns eason Water sh Burrows (tion Visible o d or Stresse orphic Positi leutral Test (Yes X minimum of two (B10) Table (C2) C8) on Aerial Image ed Plants (D1) on (D2) (D5)	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Wate	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) n Visible on Aerial Ir Vegetated Concave vations: er Present? Ye: Present? Ye:	ne is requ nagery (B' Surface (I	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Ex No X	apply) ained Lea auna (B1 atic Plant: Sulfide C Rhizosph of Reduc on Reduc con Reduc c	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron of tion in Ti (C7) a (D9) emarks) cenarks)) Living Rc (C4) illed Soils	Hydric Soil P	condary Surfac Draina Dry-Se Crayfis Satura Stunte Geom FAC-N	Indicators (e Soil Crack ge Patterns eason Water sh Burrows (tion Visible o d or Stresse orphic Positi leutral Test (Yes X minimum of two ss (B6) (B10) • Table (C2) C8) on Aerial Image ed Plants (D1) on (D2) (D5)	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Dept Algal Mat Iron Dept Inundatio Sparsely Field Observ Surface Wate Water Table	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t Deposits (B2) osits (B3) t Or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave vations: er Present? Ye Present? Ye	nagery (B Surface (I s	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No	apply) inned Lea auna (B1 atic Plant: Sulfide C Rhizosph of Reduc on Reduc c Surface Well Dat: plain in R Depth (ii Depth (ii	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron tion in Ti (C7) a (D9) emarks) nches): nches):) Living Rc (C4) illed Soils	Hydric Soil P	condary Surfac Draina Dry-Se Crayfit Satura Sturte Geom FAC-N	Indicators (r e Soil Crack ge Patterns eason Water sh Burrows (r tion Visible of d or Stresse orphic Positi leutral Test (Yes X minimum of two rs (B6) (B10) Table (C2) C8) on Aerial Image ed Plants (D1) on (D2) (D5)	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Wate Water Table Saturation Pr (includes cap	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave vations: er Present? Yes esent? Yes illary frince)	ne is requ nagery (B' Surface (l ss_X_s_X_sX_s	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No No	apply) ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc con Reduc c Surface Well Dats plain in R Depth (in Depth (in	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron tion in Ti (C7) a (D9) emarks) nches):) Living Ro (C4) illed Soils	Hydric Soil P	condary Surfac Draina Dry-Se Crayfis Satura Sturte Geom FAC-N	Indicators (r e Soil Crack ge Patterns eason Water sh Burrows (r tion Visible of d or Stresse orphic Positi leutral Test (Present?	Yes X minimum of two (B10) Table (C2) C8) on Aerial Image ed Plants (D1) on (D2) (D5) Yes X	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Wate Water Table I Saturation Pr (includes cap Describe Rec	N/A ches): GY frology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave vations: Present? Yea esent? Yea esent? Yea or det a (stream	ne is requ nagery (B' Surface (I ss_Xs_Xs_Xs	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No X No 0 No 2 No 2 No 2 No 2 No 2 No 2 No 2 No 2	apply) ined Lea auna (B1 atic Plant: Sulfide C Rhizosph of Reduc c Surface Well Dat: plain in R Depth (ii Depth (ii Depth (ii	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) lemarks) nches): nches): nches):) Living Rc (C4) illed Soils	Hydric Soil P	condary Surfac Draina Dry-Se Crayfis Satura Stunte Geom FAC-N	Indicators (r e Soil Crack ge Patterns eason Water sh Burrows (r tion Visible of d or Stresse orphic Positi leutral Test (/ Present?	Yes X minimum of two (B10) • Table (C2) C8) on Aerial Image ed Plants (D1) on (D2) (D5) Yes X	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Dept Algal Mat Iron Dept Inundatio Sparsely Field Observ Surface Wate Water Table Saturation Pr (includes cap Describe Rec	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t Deposits (B2) osits (B3) t Or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave vations: er Present? Yes esent? Yes esent? Yes illary fringe) corded Data (stream	nagery (B Surface (I s	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized f Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No No No Other (Exp No X No No	apply) ained Lea auna (B1 atic Plant: Sulfide C Rhizosph of Reduc on Reduc c Surface Well Dat plain in R Depth (in Depth (in Depth (in	ves (B9) 3) s (B14) Ddor (C1 eres on l tion in Ti (C7) a (D9) emarks) nches): nches): , previou) Living Rc (C4) illed Soils	Hydric Soil P	resent?	Indicators (r e Soil Crack ge Patterns eason Water sh Burrows (r tion Visible of d or Stresse orphic Positi leutral Test (/ Present?	Yes X minimum of two rs (B6) (B10) Table (C2) C8) on Aerial Image ed Plants (D1) on (D2) (D5) Yes X	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Wate Water Table Saturation Pr (includes cap Describe Rec	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave Vations: er Present? Yes esent? Yes illary fringe) corded Data (stream	ne is requ nagery (B' Surface (I s	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No No No Other (Exp No X No Other (Exp	apply) ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc Surface Well Dats plain in R Depth (in Depth (in Depth (in	ves (B9) 3) s (B14) Ddor (C1 eres on l iced Iron tion in Ti (C7) a (D9) eemarks) nches): nches):) Living Ro (C4) illed Soils 7 7 7 s inspect	Hydric Soil P	resent?	Indicators (r e Soil Crack ge Patterns eason Water sh Burrows (r tion Visible of d or Stresse orphic Positi leutral Test (/ Present?	Yes X minimum of two (B10) Table (C2) C8) on Aerial Image ed Plants (D1) on (D2) (D5) Yes X	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Wate Water Table I Saturation Pr (includes cap Describe Reco	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave vations: er Present? Ye: esent? Ye: esent? Ye: esent? Ye: orded Data (stream	nagery (B' Surface (I s	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp No X No No No No	apply) ined Lea auna (B1 atic Plant: Sulfide C Rhizosph of Reduc c Surface Well Dat plain in R Depth (in Depth (in Depth (in al photos	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) emarks) nches): nches): , previou) Living Rc (C4) illed Soils	Hydric Soil P	condary Surfac Draina Dry-Se Crayfis Satura Stunte Geom FAC-N	Indicators (r e Soil Crack ge Patterns eason Water sh Burrows (r tion Visible of d or Stresse orphic Positi leutral Test (/ Present?	Yes X minimum of two ts (B6) (B10) • Table (C2) C8) on Aerial Image ed Plants (D1) on (D2) (D5) Yes X	No orequired ory (C9) No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V X High Wat X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Wate Water Table Saturation Pr (includes cap Describe Reco Remarks:	N/A ches): GY Irology Indicators: ators (minimum of o Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) a or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave vations: er Present? Ye: esent? Ye: esent? Ye: esent? Ye: illary fringe) corded Data (stream	nagery (B Surface (I s X s X gauge, m	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No No No Other (Exp No X No	apply) ained Lea auna (B1 atic Plant: Sulfide C Rhizosph of Reduc on Reduc con Reduc c	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron of tion in Tri (C7) a (D9) a (D9) a (D9) cemarks): nches): , previou) Living Rc (C4) illed Soils 7 7 7 s inspect	Hydric Soil P	resent?	Indicators (r e Soil Crack ge Patterns eason Water sh Burrows (r tion Visible of d or Stresse orphic Positiv leutral Test (/ Present?	Yes X minimum of two ss (B6) (B10) • Table (C2) C8) on Aerial Image ed Plants (D1) on (D2) (D5) Yes X	No

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Kipp North	City/County: Fran	City/County: Franklin County			Sampling Date	: 3/5/	/2020
Applicant/Owner: Kipp			State:	ОН	Sampling Point	t: Up	land B
Investigator(s): Bryan Lombard	Section, Township,	Range:	T1N R1	7W			
Landform (hillside, terrace, etc.): Plain	Local relie	f (conca	ve, conve	ex, none):	Covex		
Slope (%): Lat: <u>40.030126</u>	Long: <u>-82.94450</u>)			Datum:		
Soil Map Unit Name: Cardington silt loam, 2 to 6 percent slopes			N	WI classif	ication: No		
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes <u>X</u>	No		(If no, exp	lain in Remarks.)	
Are Vegetation N , Soil N , or Hydrology No significantly dis	sturbed? Are "Norm	al Circum	stances	" present?	Yes X	No	
Are Vegetation N , Soil N , or Hydrology No naturally problem	ematic? (If needed,	explain	any ansv	vers in Rei	marks.)		
SUMMARY OF FINDINGS – Attach site map showing	g sampling point	locatio	ons, tra	ansects	, important fe	eature	es, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X	Is the Sampled within a Wetlan	l Area nd?	Y	'es	No <u>X</u>		
Remarks:							
VEGETATION – Use scientific names of plants.							
Tree Stratum (Plot size: 30') Absolute	Dominant Indicator Species? Status	_ Do	minance	e Test wor	ksheet:		
1. Ulmus americana 40 2. Acer saccharinum 30	Yes FACW Yes FACW	_ Nu Are	mber of [OBL, F/	Dominant S ACW, or F	Species That AC:	3	(A)
3		_ Tot Aci	al Numb oss All S	er of Domi Strata:	nant Species	4	(B)

·	70	=Total Cover		Are OBL, FACW, or FAC:	5 mai	5.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15')		—					_
1. Lonicera sp.	30	Yes	FACU	Prevalence Index workshee	et:		
2.				Total % Cover of:	Multiply	/ by:	_
3.				OBL species 0	x 1 =	0	_
4.				FACW species 70	x 2 =	140	_
5.				FAC species 15	x 3 =	45	_
	30	=Total Cover		FACU species 30	x 4 =	120	_
Herb Stratum (Plot size: 5')		—		UPL species 0	x 5 =	0	
1.				Column Totals: 115 ((A) (305	- (B)
2.				Prevalence Index = B/A =	= 2.65	5	-
3.		`					-
4.		`		Hydrophytic Vegetation Inc	licators:		
5.		`		1 - Rapid Test for Hydror	phytic Veget	ation	
6.				X 2 - Dominance Test is >	50%		
7.				3 - Prevalence Index is ≤	≤3.0 ¹		
8.				4 - Morphological Adapta	ations ¹ (Prov	ide sup	oporting
9.		`		data in Remarks or on	n a separate	sheet)	
10.				Problematic Hydrophytic	Vegetation ¹	l (Expla	ain)
Woody Vine Stratum (Plot size: 15')		=Total Cover		¹ Indicators of hydric soil and be present, unless disturbed	wetland hyd or problema	rology atic.	must
1. Vitis sp.	15	Yes	FAC	Hydrophytic			

=Total Cover

15

Vegetation

Yes X

No

Present?

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

5.

2.

Profile Des	scription: (Describe	to the dept	h needed to doc	ument the inc	licator or	confirm the absence	of indicators.)		
Depth	Matrix		Redo	x Features	1.2				
(inches)	Color (moist)	%	Color (moist)	% Тур	e' Loc-	Texture	Remarks		
0-6	10YR 3/2	100					Clay		
6-12	10YR 3/3	100							
-		·				r			
				•					
				·					
¹ Type: C=(Concentration, D=Der	bletion, RM=	Reduced Matrix,	MS=Masked S	and Grains	s. ² Location	: PL=Pore Lining, M=Matrix.		
Hydric Soi	il Indicators:					Indicator	rs for Problematic Hydric Soils ³ :		
- Histosc	ol (A1)		Sandy Gle	eyed Matrix (S4	4)	Coas	st Prairie Redox (A16)		
Histic E	Epipedon (A2)		Sandy Re	dox (S5)		Iron-I	Manganese Masses (F12)		
Black H	Histic (A3)		Stripped N	Matrix (S6)		Red	Parent Material (F21)		
Hydrogen Sulfide (A4) Dark Surface (S7)				ace (S7)		Very	Shallow Dark Surface (F22)		
Stratifie	Stratified Layers (A5) Loamy Muc				[:] 1)	Othe	er (Explain in Remarks)		
2 cm M	/luck (A10)		Loamy Gl	eyed Matrix (F	2)				
Deplete	ed Below Dark Surface	e (A11)	Depleted I	Matrix (F3)					
Thick D	Dark Surface (A12)		Redox Da	rk Surface (F6)	³ Indicator	rs of hydrophytic vegetation and		
Sandy	Mucky Mineral (S1)		Depleted I	Dark Surface (F7)	wetla	and hydrology must be present,		
5 cm M	Aucky Peat or Peat (S	3)	Redox De	pressions (F8)		unles	ss disturbed or problematic.		
Restrictive	e Layer (if observed):	:							
Type:	N/A								
Depth ((inches):					Hydric Soil Present	t? Yes No X		
Remarks:									
HYDROL	.OGY								
Wetland H	lydrology Indicators:								
Primary Inc	dicators (minimum of o	one is requir	ed; check all that	apply)		Seconda	ry Indicators (minimum of two required)		
Surface	e Water (A1)		X Water-Sta	ained Leaves (F	39)	Surfa	ace Soil Cracks (B6)		
High W	Vater Table (A2)		Aquatic Fa	auna (B13)		Drair	nage Patterns (B10)		
Saturat	tion (A3)		True Aqua	atic Plants (B14	4)	Dry-S	Season Water Table (C2)		
Water	Marks (B1)		Hydrogen	Sulfide Odor (C1)	Cray	fish Burrows (C8)		
Sedime	ent Deposits (B2)		Oxidized F	Rhizospheres (on Living R	Roots (C3) Satur	ration Visible on Aerial Imagery (C9)		
Drift De	eposits (B3)		Presence	of Reduced Irr	on (C4)	Stunt	ted or Stressed Plants (D1)		

 Stunted or Stressed Plants (D
 Geomorphic Position (D2)

Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils	(C6) Geomorphic Position (D2)				
Iron Deposits (B5)	Thin Muck Surface (C7)	FAC-Neutral Test (D5)				
Inundation Visible on Aerial Imagery (B7)	Gauge or Well Data (D9)					
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)					
Field Observations:						
Surface Water Present? Yes	No X Depth (inches):					
Water Table Present? Yes	No X Depth (inches):					
Saturation Present? Yes	No X Depth (inches):	Wetland Hydrology Present? Yes No X				
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monited	oring well, aerial photos, previous inspecti	ions), if available:				
Remarks:						

Project/Site: Kipp N	orth		City/Cou	City/County: Franklin County			Sampling Date	3/5/2020	
Applicant/Owner:	KIPP					State:	ОН	Sampling Point	t: Wetland C
Investigator(s): Brya	n Lombard			Section,	Township, Range	: <u>T1N R</u>	17W		
Landform (hillside, t	errace, etc.): P	lain			Local relief (cond	Concave			
Slope (%): 3	Lat: 40.0289	136		Long:	-82.944410			Datum:	
Soil Map Unit Name	: Bennington si	It loam, 2 to 6	percent slopes			1	WI classi	fication: No	
Are climatic / hydrol	ogic conditions	on the site typi	ical for this time of	year?	Yes X	No	(If no, exp	plain in Remarks.))
Are Vegetation N	_, Soil <u>N</u> , (or Hydrology_1	No significantly di	isturbed?	Are "Normal Circu	umstances	s" present?	Yes <u>X</u>	No
Are Vegetation N	, Soil N , (or Hydrology_1	No naturally prob	lematic?	(If needed, explai	n any ans	wers in Re	marks.)	
SUMMARY OF	FINDINGS -	- Attach site	e map showin	g sampliı	ng point loca	tions, tr	ansects	, important fe	atures, etc.
Hydrophytic Vegeta Hydric Soil Presen Wetland Hydrology	ation Present? t? / Present?	Yes X Yes X Yes X	No No No	ls the withi	e Sampled Area n a Wetland?	,	Yes_X	No	
Remarks:									
	<u> </u>	<u> </u>							
VEGETATION -	- Use scienti	fic names of	r plants.						
Tree Stratum	(Plot size:	30')	Absolute % Cover	Dominant Species?	Indicator Status E	ominanc	e Test wo	rksheet:	
1. Acer saccharin	um`	/	30	Yes	FACW	lumber of	Dominant	Species That	
				Vee				-	C (A)

	20	. 00		Number of Dominant Species 1	แลเ				
2. Ulmus americana	25	Yes	FACW	Are OBL, FACW, or FAC:	6	(A)			
3. Acer negundo	15	Yes	FACW	Total Number of Dominant Spe	cies				
4				Across All Strata:	7	(B)			
5				Percent of Dominant Species T	hat				
_	70	=Total Cover		Are OBL, FACW, or FAC:	85.7%	(A/B)			
Sapling/Shrub Stratum (Plot size: 15')									
1. Fraxinus pennsylvanica	30	Yes	FACW	Prevalence Index worksheet:					
2. Rosa multiflora	15	Yes	FACU	Total % Cover of:	Multiply by:	_			
3. Privet sp.	10	No	FACW	OBL species 25 x	1 = 25	_			
4				FACW species 145 x	2 = 290				
5.				FAC species 0 x	3 = 0				
	55	=Total Cover		FACU species 15 x	4 = 60				
Herb Stratum (Plot size: 5')				UPL species 0 x	5 = 0				
1. Cinna arundinacea	25	Yes	OBL	Column Totals: 185 (A)	375	(B)			
2. Carex sp.	15	Yes	FACW	Prevalence Index = B/A =	2.03				
3. Polygonum sp.	10	No	FACW			_			
4. Symphyotrichum lateriflorum	5	No	FACW	Hydrophytic Vegetation Indicators:					
5. Scirpus sp.	5	No	FACW	1 - Rapid Test for Hydrophy	ytic Vegetation				
6.				X 2 - Dominance Test is >50%	%				
7.		`		X 3 - Prevalence Index is ≤3.0	0 ¹				
8.		`		4 - Morphological Adaptatio	ons ¹ (Provide su	oporting			
9.				data in Remarks or on a	separate sheet)				
10.				Problematic Hydrophytic Ve	egetation ¹ (Expla	ain)			
	60	=Total Cover		¹ Indicators of hydric soil and we	etland hydrology	must			
Woody Vine Stratum (Plot size: 15')		_		be present, unless disturbed or	problematic.				
1.				Hydrophytic					
2.				Vegetation					
		=Total Cover		Present? Yes X	No				
Remarks: (Include photo numbers here or on a separate	sheet.)		1					

(inches)	Matro	<	Redo	k Featur	es			
0-3	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	10YR 2/2	95	10YR 4/6	5	С	М	Loamy/Clayey	
3-6	10YR 2/2	90	10YR 4/6	10	С	Μ	Loamy/Clayey	
6-12	10YR 3/1	90	10YR 4/6	10	С	М	Loamy/Clayey	
1 T	D D		Deduced Metrix A					Dava Lining M. Mateix
	Indicators:			15=Iviasi	keu Sano	Grains	Location. PL=r	Pore Lining, M=Matrix.
Histosol	(A1)		Sandy Gle	ved Mat	rix (S4)		Coast Prairi	e Redox (A16)
Histic En	(A1) bipedon (A2)		Sandy Rec	fox (S5)	11X (04)		Coast i rain	nese Masses (F12)
Black His	stic (A3)		Stripped M	latrix (SF	5)		Red Parent	Material (F21)
Hydroger	n Sulfide (A4)		Dark Surfa	ce (S7)	,		Very Shallo	w Dark Surface (F22)
Stratified	Lavers (A5)		Loamy Mu	ckv Mine	eral (F1)		Other (Expl	ain in Remarks)
2 cm Mu	ck (A10)		Loamy Gle	ved Mat	rix (F2)			
Depleted	Below Dark Surf	ace (A11)	Depleted N	/atrix (F:	3)			
 Thick Da	ark Surface (A12)	()	X Redox Dar	k Surfac	, e (F6)		³ Indicators of hy	drophytic vegetation and
Sandy M	lucky Mineral (S1)		Depleted D	Dark Surf	face (F7)		wetland hyc	Irology must be present,
5 cm Mu	cky Peat or Peat	(S3)	Redox Dep	pression	s (F8)		unless distu	rbed or problematic.
Restrictive I	Layer (if observe	d):						
Type:	N/	A						
Depth (in	nches):						Hydric Soil Present?	Yes X No
HYDROLO	GY							
Wetland Hyd	drology Indicato	rs:						
Drimony India	cators (minimum o	of one is reaui						
i mary marc	Water (A1)		red; check all that a	apply)			Secondary Indic	ators (minimum of two required
X Surface \			red; check all that a	apply) ned Lea	ves (B9)		Secondary Indic	ators (minimum of two required
X Surface \	ter Table (A2)		red; check all that a X Water-Stai	apply) ned Lea una (B1	ves (B9) 3)		Surface Soi X Drainage Pa	ators (minimum of two required I Cracks (B6) atterns (B10)
X Surface \ X High Wat Saturatio	ter Table (A2) on (A3)		red; check all that a X Water-Stai Aquatic Fa True Aqua	apply) ned Lea una (B13 tic Plants	ves (B9) 3) s (B14)		Secondary India Surface Soi X Drainage Pa Dry-Season	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2)
X Surface \ X High Wat Saturatio X Water Ma	ter Table (A2) on (A3) arks (B1)		red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen	apply) ned Lea una (B1 tic Plants Sulfide C	ves (B9) 3) s (B14) Ddor (C1))	Secondary India Surface Soi X Drainage Pa Dry-Season Crayfish Bu	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8)
X Surface V X High War Saturatio X Water Ma X Sedimen	ter Table (A2) on (A3) arks (B1) tt Deposits (B2)		red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R	apply) ned Lea una (B1 tic Plants Sulfide C hizosph	ves (B9) 3) s (B14) Odor (C1) eres on L) _iving R(<u>Secondary India</u> Surface Soi X Drainage Pa Dry-Season Crayfish Bu oots (C3) Saturation V	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9)
X Surface V X High War Saturatio X Water Ma X Sedimen X Drift Dep	ter Table (A2) on (A3) arks (B1) to Deposits (B2) posits (B3) t or Crust (B4)		red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence o Recent Io	apply) ned Lea una (B1 tic Plants Sulfide C hizospho of Reduc	ves (B9) 3) s (B14) Ddor (C1) eres on L ced Iron (tion in Ti) _iving Ro (C4)	<u>Secondary Indic</u> Surface Soi X Drainage Pa Dry-Season Crayfish Bu oots (C3) Saturation V Stunted or S	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
X Surface V X High War Saturatio X Water Ma X Sedimen X Drift Dep Algal Mar	ter Table (A2) on (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4)		red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence o Recent Iro	apply) ned Lea una (B1 tic Plant: Sulfide C hizosphi of Reduc n Reduc	ves (B9) 3) s (B14) Odor (C1) eres on L ced Iron (tion in Ti) Living Ri (C4) Iled Soil	Octs (C3) Secondary India Surface Soi X Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Stunted or S Stunted or S State Scondary India EAC-Neutra	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
X Surface V X High War Saturatio X Water Ma X Sedimen X Drift Dep Algal Mar Iron Depo	ter Table (A2) on (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4) osits (B5) on Visible on Aeria	al Imagery (B)	red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen B Oxidized R Presence G Recent Iro Thin Muck	apply) ned Lea una (B1 tic Plant: Sulfide C hizosphio of Reduc n Reduc Surface Well Dat	ves (B9) 3) s (B14) Odor (C1) eres on L ced Iron (tion in Ti (C7) a (D9)) _iving Ri (C4) Iled Soil	Secondary Indic Surface Soi X Drainage Pa Dry-Season Crayfish Bu oots (C3) Saturation N Stunted or S Is (C6) X Geomorphic FAC-Neutral	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) Il Test (D5)
X Surface V X High War Saturatio X Water Ma X Sedimen X Drift Dep Algal Mar Iron Depo Inundatio Sparsely	ter Table (A2) on (A3) arks (B1) ot Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) on Visible on Aeria v Vegetated Conca	al Imagery (Baave Surface (B	red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen 3 Oxidized R Presence of Recent Iro Thin Muck Sabo Other (Exp	apply) ned Lea una (B1 tic Plant: Sulfide C hizosphio of Reduc n Reduc Surface Vell Data lain in R	ves (B9) 3) s (B14) Odor (C1) eres on L ced Iron (tion in Ti (C7) a (D9) temarks)) Living Rr (C4) Iled Soil	Secondary Indic Surface Soi X Drainage Pa Dry-Season Crayfish Bu oots (C3) Saturation N Stunted or S Stunted or S Is (C6) X FAC-Neutral	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) I Test (D5)
X Surface V X High War Saturatio X Water Ma X Sedimen X Drift Dep Algal Mar Iron Depo Inundatio Sparsely Field Observ	ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) on Visible on Aeria v Vegetated Conca	al Imagery (B ave Surface (I	red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen S Oxidized R Presence G Recent Iro Thin Muck Other (Exp	apply) ned Lea una (B1 tic Plant: Sulfide C hizosph of Reduc n Reduc Surface Vell Dat: lain in R	ves (B9) 3) s (B14) Odor (C1) eres on L ced Iron (tion in Ti (C7) a (D9) lemarks)) Living Ro (C4) Iled Soil	Secondary Indic Surface Soi X Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Stunted or S Stunted or S Stunted or S FAC-Neutra	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) Il Test (D5)
X Surface V X High Wa Saturatio X Water Ma X Sedimen X Drift Dep Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Wate	ter Table (A2) on (A3) arks (B1) it Deposits (B2) oosits (B3) it or Crust (B4) osits (B5) on Visible on Aeria v Vegetated Conca vations: er Present?	al Imagery (B ave Surface (I Yes X	red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen 3 Oxidized R Presence of Recent Iro Thin Muck () Gauge or N 38) Other (Exp	apply) ned Lea una (B1 tic Plant: Sulfide C chizosph of Reduc n Reduc Surface Vell Data lain in R	ves (B9) 3) s (B14) Ddor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) eremarks)) _iving Ri (C4) Iled Soil	Secondary India Surface Soi X Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Stunted or S Stunted or S FAC-Neutra	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) Il Test (D5)
X Surface V X High Wa Saturatio X Water Ma X Sedimen X Drift Dep Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Wate Water Table	ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) on Visible on Aeria vegetated Conca vations: er Present? Present?	al Imagery (B ave Surface (I Yes <u>X</u> Yes X	red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen 3 Oxidized R Presence of Recent Iro Thin Muck Sab Other (Exp No No	apply) ned Lea una (B1 tic Plant: Sulfide C hizosph of Reduc n Reduc Surface Vell Data lain in R Depth (in Depth (in	ves (B9) 3) s (B14) Odor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) emarks) nches):) _iving Rr (C4) Iled Soil	Secondary Indic Surface Soi X Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S (C6) X Geomorphic FAC-Neutra	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) I Test (D5)
X Surface V X High Wa Saturatio X Water Ma X Sedimen X Drift Dep Algal Ma Iron Depo Inundatio Sparsely Field Observ Surface Wate Vater Table	ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) on Visible on Aeria Vegetated Conca vations: er Present? Present? resent?	al Imagery (B ave Surface (I Yes <u>X</u> Yes <u>X</u> Yes X	red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen 3 Oxidized R Presence 6 Recent Iro Thin Muck Other (Exp No No No No	apply) ned Lea una (B1 tic Plant: Sulfide C hizosph of Reduc n Reduc Surface Vell Dat: lain in R Depth (in Depth (in Depth (in	ves (B9) 3) s (B14) Odor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) eemarks) nches):nches):) _iving Rr (C4) Iled Soil	Secondary Indic Surface Soi X Drainage Pa Dry-Season Crayfish Bu oots (C3) Saturation V Stunted or S Stunted or S Stunted or S FAC-Neutra Wetland Hydrology Pres	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) I Test (D5)
X Surface V X High Wa Saturatio X Water Ma X Sedimen X Drift Dep Algal Ma Iron Depa Inundatio Sparsely Field Observ Surface Wate Water Table Saturation Pr (includes cap	ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) on Visible on Aeria vegetated Conca vations: er Present? Present? resent? pillary fringe)	al Imagery (B ave Surface (I Yes <u>X</u> Yes <u>X</u> Yes <u>X</u>	red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen 3 Oxidized R Presence 6 Recent Iro Thin Muck Other (Exp No No No No	apply) ned Lea una (B1 tic Plant: Sulfide C chizosph of Reduc n Reduc Surface Nell Data lain in R Depth (in Depth (in	ves (B9) 3) s (B14) Odor (C1) eres on L ced Iron (tion in Ti (C7) a (D9) lemarks) nches): nches):) _iving R((C4) Iled Soil	Secondary Indic Surface Soi X Drainage Pa Dry-Season Crayfish Bu oots (C3) Saturation N Stunted or S Is (C6) X Geomorphic FAC-Neutra	attors (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) Il Test (D5)
X Surface V X High Wa Saturatio X Water Ma X Sedimen X Drift Dep Algal Ma Iron Depo Inundatio Sparsely Field Observ Surface Wate Saturation Pr (includes cap Describe Rec	ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) osits (B5) on Visible on Aeria Vegetated Conca vations: er Present? Present? present? pillary fringe) corded Data (stree	al Imagery (B ave Surface (I Yes <u>X</u> Yes <u>X</u> Yes <u>X</u> am gauge, mo	red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen 3 Oxidized R Presence 0 Recent Iro Thin Muck Other (Exp No No No No No Onitoring well, aeria	apply) ned Lea una (B1 tic Plant: Sulfide C hizosph of Reduc n Reduc Surface Vell Data lain in R Depth (in Depth (in Depth (in leant)	ves (B9) 3) s (B14) Odor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) eremarks) nches): nches): , previous) _iving Rr (C4) Iled Soil 1 1 0 s inspec	Secondary Indic Surface Soi X Drainage Pa Dry-Season Crayfish Bu oots (C3) Saturation N Stunted or S Is (C6) X Geomorphic FAC-Neutra Wetland Hydrology Present .ttions), if available:	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) I Test (D5)
X Surface V X High Wa Saturatio X Water Ma X Sedimen X Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Observ Surface Wate Vater Table Saturation Pr (includes cap Describe Rec	ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) it or Crust (B4) osits (B5) on Visible on Aeria vVegetated Conca vations: er Present? Present? Present? pillary fringe) corded Data (stree	al Imagery (B ave Surface (I Yes <u>X</u> Yes <u>X</u> Yes <u>X</u> am gauge, mo	red; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen 3 Oxidized R Presence 6 Recent Iro Thin Muck Other (Exp No No No No No Onitoring well, aeria	apply) ned Lea una (B1 tic Plant: Sulfide C hizosph of Reduc n Reduc Surface Vell Dat: lain in R Depth (in Depth (in Depth (in Depth (in	ves (B9) 3) s (B14) Ddor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) eemarks) nches): nches): , previous) _iving Rr (C4) Iled Soil	Secondary Indic Surface Soi X Drainage Pa Dry-Season Crayfish Bu oots (C3) Saturation N Stunted or S Stunted or S Stunted or S FAC-Neutra Wetland Hydrology Presentations), if available:	ators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) I Test (D5)

Project/Site: Kipp North	Project/Site: Kipp North							Sampling Dat	te: <u>3</u>	/5/2020)
Applicant/Owner: Ki	рр				St	ate:	ОН	Sampling Poi	nt:	Upland	С
Investigator(s): Bryan Lo	ombard		Section, T	ownship, Rang	e: <u>T</u> 1	1N R1 ⁻	7W				
Landform (hillside, terra	ce, etc.): <u>Plain</u>		I	_ocal relief (cor	ncave,	conve	x, none):	Covex			
Slope (%): 5 La	at: 40.029001		Long: -8	32.944408				Datum:			
Soil Map Unit Name: B	ennington silt loam, 2 to 6	percent slopes				N	WI classi	fication: No			
Are climatic / hydrologic	conditions on the site typ	ical for this time of y	ear?	Yes <u>X</u>	No		(If no, exp	plain in Remarks	s.)		
Are Vegetation N, S	Soil N , or Hydrology	No significantly dist	turbed? A	re "Normal Cir	cumsta	ances"	present?	Yes <u>X</u>	No		
Are Vegetation N, S	Soil <u>N</u> , or Hydrology	No naturally proble	matic? (I	f needed, expl	ain any	/ answ	ers in Re	marks.)			
SUMMARY OF FIN	IDINGS – Attach site	e map showing	samplin	g point loc	ation	s, tra	insects	, important	featu	res, e	tc.
Hydrophytic Vegetatior Hydric Soil Present? Wetland Hydrology Pre	n Present? Yes X Yes esent? Yes	No NoX NoX	Is the withir	Sampled Area	9	Y	es	No <u>X</u>			
Remarks:											
VEGETATION - Us	se scientific names o	f plants.									
Tree Stratum (F	Plot size: <u>30'</u>)	Absolute E % Cover S	Dominant Species?	Indicator Status	Domir	nance	Test wo	rksheet:			
1. Ulmus americana		40	Yes	FACW	Numbe	er of D	Dominant	Species That	0	/ ^	,
2. Acer saccharinum		30	res	FACW	Are OI	вL, F <i>F</i>	ACVV, OF F	-AC:	3	(A)
4.					I otal N Across	Numbe s All S	er of Dom trata:	inant Species	4	(B	.)

Tree Stratum	(Plot size:	30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Tes	t workshe	et:		
1. Ulmus americar	na 📃			40	Yes	FACW	Number of Domi	nant Spec	es That		
2. Acer saccharinu	ım			30	Yes	FACW	Are OBL, FACW	, or FAC:	-	3	(A)
3 4							Total Number of Across All Strata	Dominant a:	Species	4	(B)
5				70	=Total Cover		Percent of Domi Are OBL, FACW	nant Speci /, or FAC:	es That	75.0%	_(A/B)
Sapling/Shrub Strat	<u>um</u> (Plot	size:	15')								
1. Lonicera sp.	1. Lonicera sp.				Yes	FACU	Prevalence Inde	ex worksh	eet:		
2.							Total % Co	ver of:	Mu	Iltiply by:	_
3.							OBL species	0	x 1 =	0	_
4.							FACW species	70	x 2 =	140	_
5.							FAC species	15	x 3 =	45	
				30	=Total Cover		FACU species	30	x 4 =	120	_
Herb Stratum	(Plot size:	5')				UPL species	0	x 5 =	0	_
1.							Column Totals:	115	- (A)	305	(B)
2.							Prevalence In	dex = B/A		2.65	_ `´
3.											-
4.							Hydrophytic Ve	getation I	ndicators	5:	
5.							1 - Rapid Te	est for Hvdr	ophytic V	egetation	
6.							X 2 - Dominan	ce Test is	>50%		
7							3 - Prevalen	ce Index is	$<3.0^{1}$		
8							4 - Morpholo	ndical Adar	tations ¹ (Provide su	nnorting
9							data in Re	emarks or (on a sepa	rate sheet))
10.							Problematic	Hvdrophvt	ic Vegeta	ation ¹ (Expl	ain)
Woody Vine Stratur	<u>m</u> (Plot	size:	15')		=Total Cover		¹ Indicators of hydebe present, unless	dric soil an ss disturbe	d wetland d or prob	l hydrology lematic.	must
1. Vitis sp.				15	Yes	FAC	Hydrophytic				
2.							Vegetation				
				15	=Total Cover		Present?	Yes X	No		
Remarks: (Include	photo numbers	here or o	on a separ	ate sheet.)			-				

Profile Des	cription: (Describe	e to the dep	oth needed to doc	ument t	he indica	ator or o	confirm the	absence o	f indicators	.)	
Depth	Matrix		Redo	x Featur	es						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Tex	ture		Remarks	
0-6	10YR 3/2	100								Clay	
6-12	10YR 3/3	100									
1 T : may 0, 0			Deduced Metric N					21	DI Dava Li	ing M. Mate	
	oncentration, D=De	pletion, RIVI	=Reduced Matrix, N	/IS=IVIas	ked Sand	Grains		Location:	PL=Pore Li	ning, ivi=iviatr	IX.
Hydric Soll			Sandy Cla	vod Mot	riv (84)			Indicators	Broirio Bode		5011S 1:
	(AI)		Sandy Gie	yeu wat	fix (54)			Coasi		DX (A10)	
	(A2)		Saliuy Red	10X (33) Intriv (S4	3)			Rod E	anganese iv	asses (F12)	
Black Th	Suc(A3)		Oark Surfa	anix (30))				Shallow Dark	ai (F2T) Surface (F2'	2)
Stratified	d Lavers (A5)			cky Min	aral (F1)			Other	(Evolain in F	Ounace (1 22	<u>~</u>)
2 cm Mi	uck (A10)		Loamy Gle	eved Mat	trix (F2)					cinaixs)	
Depleter	d Below Dark Surfac	ce (A11)	Depleted I	Jatrix (F	3)						
Thick Da	ark Surface (A12)		Redox Da	k Surfac	c, ce (F6)			³ Indicators	s of hydrophy	tic vegetatior	n and
Sandy M	Aucky Mineral (S1)		Depleted [Dark Sur	face (F7)			wetlar	nd hydrology	must be pres	sent,
5 cm Mu	ucky Peat or Peat (S	\$3)	Redox De	oression	s (F8)			unless	s disturbed o	r problematic	· ·
Restrictive	l aver (if observed).			. ,						
Type:	N/A	,.									
Depth (i	nches):						Hvdric So	oil Present	?	Yes	No X
Pomorko:	,										
Remarks.											
HYDROLO	DGY										
Wetland Lly											
	cators (minimum of	ono is roqui	irad: chack all that	annly)				Sacandan	(Indicators (minimum of t	wo roquirod)
<u>Filliary Inui</u> Surface	Water ($\Delta 1$)	Une is requ	Water-Sta	ined Les	NAS (RQ)			Surfa	A Soil Crack	s (B6)	<u>wo requireu)</u>
High Wa	ater Table (A2)			una (R1	3)			Draina	ade Patterns	(B10)	
Saturatio	on (A3)		True Aqua	tic Plant	s (B14)			Drv-S	eason Water	Table (C2)	
Water N	larks (B1)		Hvdrogen	Sulfide (Ddor (C1)		Cravfi	sh Burrows (C8)	
Sedimer	nt Deposits (B2)		Oxidized F	Rhizosph	eres on	, Living Re	oots (C3)	Satura	ation Visible	on Aerial Ima	gery (C9)
Drift Dep	posits (B3)		Presence	of Reduc	ced Iron	(C4)	()	Stunte	ed or Stresse	d Plants (D1))
Algal Ma	at or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soil	s (C6)	Geom	orphic Positi	on (D2)	
Iron Dep	oosits (B5)		Thin Muck	Surface	e (C7)			FAC-I	Neutral Test	(D5)	
Inundati	on Visible on Aerial	Imagery (B	7) Gauge or	Well Dat	a (D9)						
Sparsely	y Vegetated Concav	e Surface (I	B8)Other (Exp	olain in F	(Remarks						
Field Obser	vations:										
Surface Wat	ter Present? Y	es	No X	Depth (i	nches):						
Water Table	Present? Y	'es	No <u>X</u>	Depth (i	nches):						
Saturation P	Present? Y	'es	No <u>X</u>	Depth (i	nches):		Wetlan	d Hydrolog	y Present?	Yes	No <u>X</u>

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

Remarks:

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Kipp North	City/Co	ounty: Franklin Co	unty		Sampling Date	e: <u>3/5</u>	5/2020
Applicant/Owner: KIPP			State:	ОН	Sampling Poin	nt: W	etland D
Investigator(s): Bryan Lombard	Section	, Township, Range:	T1N R1	17W			
Landform (hillside, terrace, etc.): Plain		Local relief (conc	ave, conv	ex, none):	Concave	_	
Slope (%): Lat: _40.028703	Long:	-82.94672			Datum:		
Soil Map Unit Name: Bennington silt loam, 2 to 6 percent slopes			N	WI classi	fication: No		
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes X N	0	(If no, ex	plain in Remarks	.)	
Are Vegetation N , Soil N , or Hydrology No significantly d	isturbed?	Are "Normal Circu	mstances	" present?	Yes X	No	
Are Vegetation N , Soil N , or Hydrology No naturally prob	lematic?	(If needed, explair	n any ansv	wers in Re	marks.)		
SUMMARY OF FINDINGS – Attach site map showin	g sampl	ing point locat	ions, tr	ansects	, important f	eature	es, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	ls ti witi	he Sampled Area hin a Wetland?	١	/es <u>X</u>	No		
Remarks:	_						
VEGETATION – Use scientific names of plants.							
Tree Stratum (Plot size: 30') Absolute	Dominant Species?	Indicator Status D	ominance	e Test wo	rksheet:		
1. Populus deltoides 25	Yes	FAC N	umber of	Dominant	Species That		
2. Fraxinus pennsylvanica 10	Yes	FACW A	re OBL, F	ACW, or F	FAC:	7	(A)
3. <u>Acer saccharinum</u> 15	Yes	_ FACW To	otal Numb	er of Dom	inant Species	7	

4				Across All Strata:		7	(B)
5	50	=Total Cover		Percent of Dominar Are OBL, FACW, or	nt Species That r FAC:	100.0%	_(A/B)
Sapling/Shrub Stratum (Plot size: 15')							
1. Fraxinus pennsylvanica	15	Yes	FACW	Prevalence Index v	worksheet:		
2. Lonicera sp.	5	Yes	FAC	Total % Cover	of: M	ultiply by:	_
3. Ligustrum sp.	3	No	FAC	OBL species	0 x 1 =	0	
4.				FACW species	55 x 2 =	110	
5.				FAC species	38 x 3 =	114	
	23	=Total Cover		FACU species	0 x 4 =	0	
Herb Stratum (Plot size: 5')				UPL species	0 x 5 =	0	_
1. Carex sp.	15	Yes	FACW	Column Totals:	93 (A)	224	(B)
2.				Prevalence Index	c = B/A =	2.41	_
3.							-
4.				Hydrophytic Veget	ation Indicator	s:	
5.				1 - Rapid Test f	or Hydrophytic	Vegetation	
6.				X 2 - Dominance	Test is >50%	0	
7.				X 3 - Prevalence	Index is ≤3.0 ¹		
8.				4 - Morphologic	al Adaptations ¹	(Provide su	pportin
9.				data in Rema	arks or on a sep	arate sheet)
10.				Problematic Hy	drophytic Veget	ation ¹ (Expl	ain)
Woody Vine Stratum (Plot size: 15')	15	=Total Cover		¹ Indicators of hydric	soil and wetlan	d hydrology	must
1. Vitis sp.	5	Yes	FAC			Sichalic.	
2.				Hydrophytic			
	5	=Total Cover		Present? Ye	s <u>X</u> No		

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

Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-3	10YR 4/3	75	10YR 5/6	25	С	М	Mucky Loam/Clay			
3-6	10YR 4/2	70	10YR 5/6	30	С	М	Mucky Loam/Clay	Prominen	t redox conce	entrations
6-12	10YR 4/2	70	10YR 5/6	30	С	М	Mucky Loam/Clay	Prominen	t redox conce	entrations
					_					
				·						
1						_	2			
'Type: C=C	oncentration, D=Dep	pletion, RM	=Reduced Matrix, I	MS=Masl	ked Sand	d Grains	Location:	PL=Pore Lir	ning, M=Matri	X.
Histosol			Sandy Gl	wed Mat	riv (S4)		Indicators	Prairie Redo		5011S 1:
Histic Fr	(A1)		Sandy Be	dov (S5)	11X (34)		Coast		x (A10)	
Black Hi	stic (Δ 3)		Sandy Re	Jatrix (SF	;)		Red P	anganese m aront Matoria	asses (F12)	
Black I II	suc (A3) $(A4)$		Stripped in	ace (97)))			alelli Malella	u (FZT) Surface (E22	2
Stratific	Al avers (A5)				aral (⊑1)			(Evolain in P	oundet (FZZ	,
	Layers(A3)			oved Met	riv (E2)				emainsj	
2 CHI IVIL	ick (ATU) d Rolow Dark Surfaa	o (A11)		eyeu wat	11X (FZ)					
Depieted	a below Dark Surface	e (ATT)		rk Surfoo	3) 10 (EE)		³ Indiantoro	of hydrophy	io vogotation	and
Fondy A	AIR SUIIACE (AIZ)			IK Sullau Dork Sur	e (FO)		muicators			anu
5 cm Mi	ucky Mineral (ST)	3)	Depleted	pression:	ace (F7) s (F8)		unless	disturbed or	problematic.	ent,
Restrictive	l aver (if observed)	- <i>)</i> -			- ()				F	
Type [.]	N/A	•								
Depth (i	nches):						Hvdric Soil Present?		Yes X	No
HYDROLO	OGY									
Wetland Hy	drology Indicators:									
Primary Indi	cators (minimum of o	one is requ	ired; check all that	apply)			Secondary	Indicators (r	ninimum of ty	NO require
X Surface	Water (A1)		X Water-Sta	ined Lea	ves (B9)		Surfac	e Soil Crack	s (B6)	
X High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		X Draina	ge Patterns	(B10)	
X Saturation	on (A3)		True Aqua	atic Plant	s (B14)		Dry-Se	eason Water	Table (C2)	
X Water M	larks (B1)		Hydrogen	Sulfide C	Odor (C1)	Crayfis	sh Burrows (0	C8)	
Sedimer	nt Deposits (B2)		Oxidized I	Rhizosph	eres on l	_iving R	oots (C3) Satura	tion Visible c	on Aerial Imag	gery (C9)
X Drift Dep	oosits (B3)		Presence	of Reduc	ed Iron ((C4)	Stunte	d or Stresse	d Plants (D1)	
Algal Ma	at or Crust (B4)		Recent Iro	on Reduc	tion in Ti	lled Soi	ls (C6) X Geom	orphic Positio	on (D2)	
Iron Dep	oosits (B5)		Thin Mucl	Surface	(C7)		FAC-N	leutral Test (D5)	
Inundati	on Visible on Aerial I	magery (B	7) Gauge or	Well Dat	a (D9)					
Sparsely	Vegetated Concave	e Surface (B8) Other (Ex	plain in R	emarks)					
Field Obser	vations:									
Surface Wat	ter Present? Ye	es <u>X</u>	No	Depth (ii	nches):	1				
Water Table	Present? Ye	es <u>X</u>	No	Depth (ii	nches):	1				
Saturation P	resent? Ye	es <u>X</u>	No	Depth (ii	nches):	0	Wetland Hydrology	/ Present?	Yes X	No
(includes ca	pillary fringe)			-1 t t						
Describe Re	corded Data (stream	n gauge, m	onitoring well, aeria	ai photos,	previou	s inspec	ctions), if available:			
Pomarka:										
WEILINS .										

Project/Site: Kipp No	orth			City/Co	unty: Fra	nklin Cou	nty		Sampling Date:	3/5/2020
Applicant/Owner:	Kipp						State:	OH	Sampling Point:	Upland D
Investigator(s): Brya	n Lombard			Section,	Township	, Range:	T1N R	17W		
Landform (hillside, te	errace, etc.): Pl	ain			Local reli	ef (conca	ve, conv	ex, none)	Covex	
Slope (%): 3	Lat: 40.0293	17		Long:	-82.94529	97			Datum:	
Soil Map Unit Name	: Bennington s	ilt loam, 2 to 6	percent slopes				11	WI class	ification: No	
Are climatic / hydrole	ogic conditions	on the site typi	ical for this time of y	ear?	Yes <u>X</u>	No)	(If no, ex	plain in Remarks.)	
Are Vegetation N	, Soil <u>N</u> , c	or Hydrology	No significantly dist	urbed?	Are "Norn	nal Circun	nstances	s" present	? Yes <u>X</u> No)
Are Vegetation N	, Soil <u>N</u> , c	or Hydrology	No naturally proble	matic?	(If needed	d, explain	any ans	wers in Re	emarks.)	
SUMMARY OF	FINDINGS -	Attach site	e map showing	sampli	ng poin	t locati	ons, tr	ansects	s, important fea	tures, etc.
Hydrophytic Vegeta Hydric Soil Present Wetland Hydrology	ation Present? ? Present?	Yes Yes Yes	No <u>X</u> No <u>X</u> No <u>X</u>	ls th with	e Sample in a Wetla	d Area and?	,	Yes	No <u>X</u>	
Remarks:				-						
VEGETATION -	- Use scienti	fic names of	f plants.							
			Absolute [Dominant	Indicate	or				

Tree Stratum	(Plot size:	30')	% Cover	Species?	Status	Dominance Tes	t worksh	eet:		
 Populus deltoide 2. 	9S			45	Yes	FAC	Number of Domi Are OBL, FACW	nant Spec , or FAC:	cies That	1	(A)
3. 4.							Total Number of Across All Strata	Dominan a:	t Species	3	(B)
5		4		45	=Total Cover		Percent of Domin Are OBL, FACW	nant Spec /, or FAC:	cies That	33.3%	(A/B)
Sapling/Shrub Strat	um (Plot	size: 1	5)	45	Vaa		Drevelence Inde	av warkal	haat		
1. Lonicera sp.				40	<u>res</u>			ex works	neet:	ltiply by	
2. <u>R0Sa IIIululloia</u>				5		FACU					_
3. 					·			0	$- x^{1} = - x^{2}$	0	_
4							EAC species	45	- ^{×2} -	135	_
5				50	-Total Cover		FACU species	55	- ^3	220	_
Herb Stratum	(Plot size:	5'	, -	50				0	- ^+	0	_
1	(1 101 3126.	5	/				Column Totals:	100	- ^ ³ -	355	(B)
2					·		Brovalance In	dox = R/r		3 55	_(D)
2					. <u> </u>		i revalence in		·	5.55	_
3					·		Hydrophytic Vo	actation	Indicators		
4					·					logotation	
o					·					egetation	
0. 					·		2 - Dominan		5 > 50%		
7					·		3 - Prevalent		$S \ge 3.0$	Drovido ou	poorting
o					·		4 - Norpholo	marks or	on a sena	rate sheet) V
9					·		Decklose of a				/
10							Problematic	Hydropny	nic vegeta	ttion (Expi	ain)
Woody Vine Stratur	<u>n</u> (Plot	size: 1	<u>-</u> 5')		= I otal Cover		¹ Indicators of hyd be present, unles	dric soil ar ss disturb	nd wetland ed or prob	l hydrology lematic.	' must
1. Vitis sp.				5	Yes	FACU	Hydrophytic				
2.				5	=Total Cover		Vegetation Present?	Yes	No	х	
Remarks: (Include	photo numbers	here or on	a separat	te sheet.)	<u> </u>		<u> </u>				

Profile Desc	ription: (Describe	to the dept	h needed to doc	ument t	he indica	ator or o	onfirm the absenc	e of indicators	5.)	
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-6	10YR 3/2	100							Clay	
6-12	10YR 3/3	100						_		
								_		
								_		
								_		
¹ Type: C=Co	oncentration, D=De	pletion, RM=I	Reduced Matrix, I	MS=Mas	ked Sand	d Grains	. ² Locati	on: PL=Pore Li	ning, M=Matr	ix.
Hydric Soil I	indicators:						Indicat	ors for Proble	matic Hydric	Soils ³ :
Histosol	(A1)		Sandy Gle	eyed Mat	rix (S4)		Co	ast Prairie Red	ox (A16)	
Histic Ep	ipedon (A2)		Sandy Re	dox (S5)			Iro	n-Manganese N	lasses (F12)	
Black His	stic (A3)		Stripped N	Aatrix (S	6)		Re	d Parent Mater	al (F21)	
Hydroger	n Sulfide (A4)	Stripped Matrix (S6) Dark Surface (S7) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) face (A11)					Ve	ry Shallow Dark	Surface (F2	2)
Stratified	Layers (A5)		Loamy Mu	icky Min	eral (F1)		Oth	ner (Explain in f	Remarks)	
2 cm Mu	ck (A10)	<i>(</i> , , , ,)	Loamy Gle	eyed Ma	trix (F2)					
Depleted	Below Dark Surfac	e (A11)	Depleted I	Matrix (F	3)		3	<i>.</i>		
Thick Da	rk Surface (A12)		Redox Da	rk Surfac	ce (F6)		andicat	ors of hydroph	/tic vegetation	n and
	ucky Mineral (S1)	0)		Jark Sur	Tace (F7))	we	tiand nydrology	must be pres	sent,
	CKY Peat or Peat (S	3)	Redox De	pression	S (F8)		uni	ess disturbed c	or problematic	•
Restrictive L	_ayer (if observed)	:								
Туре:	N/A									
Depth (in	iches):						Hydric Soil Prese	nt?	Yes	No <u>X</u>
Remarks:										
Primony India	arology indicators	: opo is roquir	d check all that	annly)			Sacar	lany Indicators	minimum of t	we required)
<u>Finiary indic</u>	Mater (A1)		Water-Sta	ined Les			<u>Second</u>	rface Soil Crack	(R6)	<u>wo requirea)</u>
High Wa	ter Table ($\Delta 2$)			nieu Lea auna (R1	3) 3)		0u	nace Soli Craci	(B10)	
Saturatio	$\frac{1}{2} (A3)$			atic Plant	5) is (R14)		Dra	-Season Wate	r Table (C2)	
Water Ma	arks (B1)		Hydrogen	Sulfide (Odor (C1)	Cr	avfish Burrows	(C8)	
Sedimen	t Deposits (B2)		Oxidized F	Rhizosph	eres on l	/ Livina R	${}$	turation Visible	on Aerial Ima	gery (C9)
Drift Dep	osits (B3)		Presence	of Redu	ced Iron	(C4)	Stu	inted or Stresse	ed Plants (D1)
Algal Ma	t or Crust (B4)		Recent Irc	n Reduc	tion in Ti	illed Soil	s (C6) Ge	omorphic Posit	ion (D2)	
Iron Dep	osits (B5)		Thin Muck	Surface	e (C7)		FA	C-Neutral Test	(D5)	
Inundatio	on Visible on Aerial	Imagery (B7)	Gauge or	Well Dat	ta (D9)				()	
Sparsely	Vegetated Concav	e Surface (B	3) Other (Exp	olain in F	Remarks)					
Field Observ	vations:									
Surface Wate	er Present? Y	es	No X	Depth (i	nches):					
Water Table	Present? Y	es	No X	Depth (i	nches):					
Saturation Pr	resent? Y	es	No X	Depth (i	nches):		Wetland Hydrol	ogy Present?	Yes	No X
(includes cap	oillary fringe)			`						
· · · · · · · · · · · · · · · · · · ·										

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

Remarks:

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Kipp No	orth				City/Co	ounty: Franklin Cou	inty		Sampling Date:	3/5/2020
Applicant/Owner:	KIPP						State:	ОН	Sampling Point:	Wetland E
Investigator(s): Bryar	ו Lombard				Section	, Township, Range:	T1N R	17W		
Landform (hillside, te	errace, etc.): Pl	ain				Local relief (conca	ave, conv	ex, none):	Concave	
Slope (%): 3	Lat: 40.0296	47			Long:	-82.945459			Datum:	
Soil Map Unit Name:	Bennington si	it loam,	2 to 6 p	ercent slopes			11	VWI classif	fication: No	
Are climatic / hydrolc	gic conditions	on the	site typic	cal for this time o	f year?	Yes <u>X</u> No	0	(If no, exp	plain in Remarks.)	
Are Vegetation N	, Soil <u>N</u> , c	or Hydri	ology <u>N</u>	lo significantly c	disturbed?	Are "Normal Circur	mstances	s" present?	Yes <u>X</u> No)
Are Vegetation N	, Soil <u>N</u> , c	or Hydro	ology <u>N</u>	lo naturally prot	olematic?	(If needed, explain	any ans	wers in Re	marks.)	
SUMMARY OF	FINDINGS -	· Attac	ch site	map showir	ıg sampl	ing point locati	ions, tr	ansects	, important fea	tures, etc.
Hydrophytic Vegeta	tion Present?	Yes	x	No	ls ti	ne Sampled Area				
Hydric Soil Present	?	Yes	Х	No	witł	nin a Wetland?	٢	Yes <u>X</u>	No	
Wetland Hydrology	Present?	Yes	Х	No						
Remarks:										
		<u> </u>								
VEGETATION -	Use scienti	lic nar	nes or	plants.						
Tree Stratum	(Plot size:	30')	Absolute % Cover	Dominant Species?	Indicator Status Do	ominanc	e Test wo	rksheet:	

1. Ulmus americana	20	Yes	FACW	Number of Dominant Species That	
2. Acer saccharinum	5	Yes	FACW	Are OBL, FACW, or FAC: 8	(A)
3.				Total Number of Dominant Species	
4.				Across All Strata: 9	(B)
5.				Percent of Dominant Species That	
	25	=Total Cover		Are OBL, FACW, or FAC: 88.9%	(A/B)
Sapling/Shrub Stratum (Plot size: 15')					
1. Fraxinus pennsylvanica	20	Yes	FACW	Prevalence Index worksheet:	
2. Ligustrum sp.	10	Yes	FAC	Total % Cover of: Multiply by:	
3. Rosa multiflora	5	No	FACU	OBL species 0 x 1 = 0	
4.				FACW species 100 x 2 = 200	
5.				FAC species 40 x 3 = 120	
	35	=Total Cover		FACU species 15 x 4 = 60	
Herb Stratum (Plot size: 5')				UPL species 0 x 5 = 0	
1. Cinna sp.	30	Yes	FACW	Column Totals: 155 (A) 380	(B)
2. Polygonum sp.	25	Yes	FACW	Prevalence Index = B/A = 2.45	
3. Aster sp.	20	Yes	FAC		_
4.				Hydrophytic Vegetation Indicators:	
5.				1 - Rapid Test for Hydrophytic Vegetation	
6.				X 2 - Dominance Test is >50%	
7.				X 3 - Prevalence Index is $\leq 3.0^1$	
8.				4 - Morphological Adaptations ¹ (Provide su	upporting
9.				data in Remarks or on a separate shee	t)
10.				Problematic Hydrophytic Vegetation ¹ (Exp	lain)
	75	=Total Cover		¹ Indicators of hydric soil and wetland hydrolog	v must
Woody Vine Stratum (Plot size: 15')				be present, unless disturbed or problematic.	,
1. Lonicera japonica	10	Yes	FACU	Hydrophytic	
2. Vitis sp.	10	Yes	FAC	Vegetation	
	20	=Total Cover		Present? Yes X No	

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

(inches) 0-3 3-9 9-12	Color (moist) 10YR 3/1 10YR 4/2 10YR 5/1	% 90 85 75	Color (moist) 10YR 5/6 10YR 6/6 10YR 6/6	% 10 15 25	Type ¹ C C	Loc ² M	Texture	Remarks Clay
0-3 3-9 9-12	10YR 3/1 10YR 4/2 10YR 5/1	90 85 75	10YR 5/6 10YR 6/6 10YR 6/6	10 15 25	<u>с</u>	<u>M</u>		Clay
3-9 9-12	10YR 4/2 10YR 5/1	85 75	10YR 6/6 10YR 6/6	15 25	С	M		
9-12	10YR 5/1	75	10YR 6/6	25		IVI		
			1011(0/0	20	C	M		
							· · · · · ·	
							·	
		<u> </u>						
¹ Type: C=Con	centration, D=Deple	etion, RM=F	Reduced Matrix, N	/IS=Masł	ked Sand	d Grains	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Inc	dicators:						Indicators	s for Problematic Hydric Soils ³ :
Histosol (A	.1)		Sandy Gle	yed Mati	rix (S4)		Coast	Prairie Redox (A16)
Histic Epipe	edon (A2)		Sandy Ree	dox (S5)			Iron-M	langanese Masses (F12)
Black Histic	c (A3)		Stripped M	latrix (S6	5)		Red P	arent Material (F21)
Hydrogen S	Sulfide (A4)		Dark Surfa	ace (S7)			Very S	Shallow Dark Surface (F22)
Stratified La	ayers (A5)		Loamy Mu	icky Mine	eral (F1)		Other	(Explain in Remarks)
2 cm Muck	: (A10)		Loamy Gle	eyed Mat	rix (F2)			
Depleted B	Below Dark Surface	(A11)	X Depleted	Matrix (F:	3)			
Thick Dark	Surface (A12)		X Redox Da	rk Surfac	e (F6)		³ Indicators	of hydrophytic vegetation and
Sandy Muc	cky Mineral (S1)		X Depleted [Dark Surf	face (F7))	wetlan	nd hydrology must be present,
5 cm Muck	xy Peat or Peat (S3)		Redox De	pressions	s (F8)		unless	s disturbed or problematic.
Restrictive La	yer (if observed):							
Туре:	N/A							
Depth (inch	nes):						Hydric Soil Present?	? Yes_X_ No
Remarks:								
IYDROLOG	iΥ							
Wetland Hydro	ology Indicators:							
Primary Indicat	<u>tors (minimum of or</u>	ne is require	ed; check all that	apply)			Secondary	/ Indicators (minimum of two require
Surface Wa	ater (A1)		X Water-Sta	ined Lea	ves (B9)		Surfac	ce Soil Cracks (B6)
X High Water	r Table (A2)		Aquatic Fa	auna (B1	3)		X Draina	age Patterns (B10)
X Saturation	(A3)		True Aqua	tic Plants	s (B14)		Dry-Se	eason Water Table (C2)
X Water Mark	ks (B1)		Hydrogen	Sulfide C	Odor (C1)	Crayfis	sh Burrows (C8)
Sediment [Deposits (B2)		Oxidized F	Rhizosph	eres on l	Living R	oots (C3) Satura	ation Visible on Aerial Imagery (C9)
Drift Depos	sits (B3)		Presence	of Reduc	ed Iron ((C4)	Stunte	ed or Stressed Plants (D1)
Algal Mat o	or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soil	s (C6) X Geom	orphic Position (D2)
Iron Depos	sits (B5)		Thin Muck	Surface	(C7)		FAC-N	Neutral Test (D5)
Inundation	Visible on Aerial Im	nagery (B7)	Gauge or	Well Data	a (D9)			
	egetated Concave	Surface (B8	3)Other (Exp	plain in R	emarks)			
Sparsely V	tions							
Sparsely V Field Observa			No X	Depth (ir	nches):			
Sparsely V Field Observa Surface Water	Present? Yes	·		D (1 (*	nches):	1		
Sparsely V Field Observa Surface Water Water Table Pr	Present? Yes resent? Yes	s X	No	Depth (II				
Sparsely V Field Observa Surface Water Water Table Pr Saturation Pres	Present? Yes resent? Yes sent? Yes		No No	Depth (ir Depth (ir	nches):	1	Wetland Hydrolog	y Present? Yes X No
Sparsely V Field Observa Surface Water Water Table Pr Saturation Pres (includes capilla	Present? Yes resent? Yes sent? Yes lary fringe)	3 X 3 X	No No	Depth (ir Depth (ir	nches):	1	Wetland Hydrolog	y Present? Yes X No
Sparsely V Field Observa Surface Water Water Table Pr Saturation Pres (includes capilla Describe Record	Present? Yes resent? Yes sent? Yes lary fringe) rded Data (stream g	gauge, mor	No No itoring well, aeria	Depth (ir Depth (ir I photos,	nches):	1 s inspec	Wetland Hydrolog	y Present? Yes <u>X</u> No
Sparsely V Field Observa Surface Water Water Table Pr Saturation Pres (includes capilla Describe Record	Present? Yes resent? Yes sent? Yes ary fringe) rded Data (stream o	gauge, mor	No No itoring well, aeria	Depth (ir Depth (ir I photos,	nches):	1 s inspec	Wetland Hydrolog	y Present? Yes <u>X</u> No

Project/Site: Kipp N	orth			City/County	/: Franklin Co	unty		Sampling Date	e: <u>3/5</u>	/2020
Applicant/Owner:	Kipp					State:	ОН	Sampling Poin	t: U	pland E
Investigator(s): Brya	n Lombard			Section, To	wnship, Range	: <u>T1N R</u> 2	17W			
Landform (hillside, t	errace, etc.): P	lain		Lo	cal relief (cond	ave, conv	ex, none):	Covex		
Slope (%):	Lat: 40.0293	17		Long: -82	.945297			Datum:		
Soil Map Unit Name	: Bennington s	ilt loam, 2 to 6	6 percent slopes			۱ ۱	WI classif	ication: No		
Are climatic / hydrol	ogic conditions	on the site typ	pical for this time of y	ear? Ye	es <u>X</u> N	lo	(If no, exp	lain in Remarks	.)	
Are Vegetation N	, Soil <u>N</u> , o	or Hydrology_	No significantly dis	turbed? Are	e "Normal Circo	umstances	" present?	Yes X	No	
Are Vegetation N	, Soil <u>N</u> , o	or Hydrology_	No naturally proble	matic? (If I	needed, explai	n any ans	wers in Rer	marks.)		
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.										
Hydrophytic Vegeta Hydric Soil Present Wetland Hydrology	ation Present? t? v Present?	Yes X Yes Yes	No NoX NoX	Is the S within a	ampled Area Wetland?	١	res	No <u>X</u>		
Remarks:										
VEGETATION -	- Use scienti	fic names c	of plants.							
Tree Stratum	(Plot size:	30')	Absolute [% Cover]	Dominant I Species?	ndicator Status D	ominance	e Test wor	ksheet:		
1. Ulmus america	na		40	Yes	FACW N	umber of	Dominant S	Species That		(
2. Acer saccharin	um		30	Yes	FACW A	re OBL, F	ACW, or F	AC:	3	(A)
4					Т А	otal Numb cross All \$	per of Domi Strata:	nant Species	4	(B)

	0.01	Absolute	Dominant	Indicator	Deminent Test mediates (
Tree Stratum (Plot size	: 30) <u>% Cover</u>	Species?	Status	Dominance Test worksneet:		
1. Ulmus americana		40	Yes	FACW	Number of Dominant Species That		<i>(</i> •)
2. Acer saccharinum		30	Yes	FACW	Are OBL, FACW, or FAC:	3	(A)
3					Total Number of Dominant Species		
4					Across All Strata:	4	(B)
5					Percent of Dominant Species That		
		70	=Total Cover		Are OBL, FACW, or FAC:	75.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 1	15')					
1. <u>Lonicera sp.</u>		30	Yes	FACU	Prevalence Index worksheet:		
2.					Total % Cover of: Mu	ultiply by:	
3.					OBL species 0 x 1 =	0	_
4.					FACW species 70 x 2 =	140	-
5.					FAC species 15 x 3 =	45	_
		30	=Total Cover		FACU species 30 x 4 =	120	_
Herb Stratum (Plot size	: 5')	-		UPL species 0 x 5 =	0	-
1.		_′			Column Totals: 115 (A)	305	(B)
2					Prevalence Index = B/A =	2.65	_(=)
						2.00	_
4					Hydrophytic Vegetation Indicators		
					1 Papid Tast for Hydrophytic V	, logotation	
					2 Dominopoo Toot in 5 50%	egetation	
8:					$\frac{1}{2}$ - Dominance Test is >50%		
7					$3 - Prevalence index is \leq 3.0$		
8					4 - Morphological Adaptations (Provide Su	pporting \
9)
10					Problematic Hydrophytic Vegeta	ation' (Expl	ain)
			=Total Cover		¹ Indicators of hydric soil and wetland	1 hydrology	must
Woody Vine Stratum (Plot size: 1	15')			be present, unless disturbed or prob	lematic.	
1. Vitis sp.		15	Yes	FAC	Hydrophytic		
2.					Vegetation		
		15	=Total Cover		Present? Yes X No		
Remarks: (Include photo num	bers here or on	a separate sheet.))				

Profile Des	cription: (Describe	to the dept	h needed to docu	ument the	e indica	tor or o	confirm the	absence of inc	licators.)		
(inches)	Color (moist)	%	Color (moist)	%	Tvpe ¹	Loc ²	Text	Ire	Remarks		
0-6	10VP 3/2	100					10/4		Clay		
0-0	101R 3/2	100							Clay		
6-12	10YR 3/3	100									
	·										
¹ Type: C=C	Concentration. D=Dep	letion. RM=	Reduced Matrix. N	IS=Maske	ed Sand	Grains		² Location: PL=	Pore Lining, M=Mat	rix.	
Hvdric Soil	Indicators:					Oranio	•	Indicators for	Problematic Hydrid	c Soils ³ :	
Histosol	l (A1)		Sandy Glev	yed Matrix	(S4)			Coast Prai	rie Redox (A16)		
Histic E	pipedon (A2)		Sandy Red	lox (S5)	()			Iron-Mang	anese Masses (F12)	I	
Black H	istic (A3)		Stripped M	atrix (S6)			Red Parent Material (F21)				
Hydroge	en Sulfide (A4)		Dark Surfa	ce (S7)			Very Shallow Dark Surface (F22)				
Stratifie	d Layers (A5)		Loamy Mu	cky Minera	al (F1)		Other (Explain in Remarks)				
2 cm Mu	uck (A10)		Loamy Gle	yed Matrix	x (F2)						
Deplete	d Below Dark Surface	e (A11)	Depleted N	Aatrix (F3)							
Thick Da	Thick Dark Surface (A12) Redox Dark Surface (F6)					³ Indicators of h	ydrophytic vegetatio	n and			
Sandy N	Mucky Mineral (S1)		Depleted D	oark Surfa	ce (F7)			wetland hy	drology must be pre	sent,	
5 cm Mu	ucky Peat or Peat (S3	3)	Redox Dep	pressions	(F8)			unless dist	urbed or problemation	с.	
Restrictive	Layer (if observed):										
Type:	N/A										
Depth (i	nches):						Hydric So	il Present?	Yes	No X	
Remarks:											
HYDROLO	DGY										
Wetland Hy	drology Indicators:										
Primary Indi	icators (minimum of c	one is requir	ed; check all that a	apply)				Secondary Ind	icators (minimum of	two required)	
Surface	Water (A1)		X Water-Stai	ned Leave	es (B9)			Surface So	oil Cracks (B6)		
High Wa	ater Table (A2)		Aquatic Fa	una (B13))			Drainage F	Patterns (B10)		
Saturati	on (A3)		True Aquat	tic Plants	(B14)			Dry-Seaso	n Water Table (C2)		
Water M	/larks (B1)		Hydrogen S	Sulfide Oc	dor (C1)			Crayfish B	urrows (C8)		
Sedime	nt Deposits (B2)		Oxidized R	hizospher	res on L	iving R	oots (C3)	Saturation	Visible on Aerial Ima	agery (C9)	
Drift De	posits (B3)		Presence of	of Reduce	d Iron (C4)		Stunted or	Stressed Plants (D1)	
Algal Ma	at or Crust (B4)		Recent Iron	n Reductio	on in Til	led Soil	ls (C6)	Geomorph	ic Position (D2)		
Iron Dep	posits (B5)		Thin Muck	Surface (C7)		FAC-Neutral Test (D5)				

Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9)									
Sparsely Vegetated Co	ncave Surface (E	38) Other (Explain in Remarks)						
Field Observations:									
Surface Water Present?	Yes	No <u>X</u>	Depth (inches):	_					
Water Table Present?	Yes	No X	Depth (inches):						
Saturation Present?	Yes	No X	Depth (inches):	Wetland Hydrology Present?	Yes	No X			
(includes capillary fringe)									
Describe Recorded Data (s	tream gauge, mo	onitoring well, a	erial photos, previous insp	pections), if available:					
Remarks:	Remarks:								

Project/Site: Kipp No	orth				City/Co	ounty: F	ranklin Cou	nty		Sampling Date:	3/5/2	2020
Applicant/Owner:	KIPP							State:	ОН	Sampling Point:	We	tland F
Investigator(s): Bryar	n Lombard				Section	, Townsł	nip, Range:	T1N R	17W			
Landform (hillside, te	errace, etc.): <u>Pl</u>	lain				Local	elief (conca	ve, conv	vex, none)	Concave		
Slope (%): 4	Lat: 40.0287	37			Long	: -82.946	6068			Datum:		
Soil Map Unit Name:	Bennington si	lt loam, 2 to	6 perce	nt slopes					NWI class	ification: No		
Are climatic / hydrolc	gic conditions	on the site	typical fo	or this time of	year?	Yes	X No)	(If no, ex	plain in Remarks.)		
Are Vegetation N	, Soil N , c	or Hydrolog	y No s	ignificantly di	sturbed?	Are "No	ormal Circur	nstances	s" present	? Yes X N	о	
Are Vegetation N	, Soil N , c	or Hydrolog	y No r	aturally probl	ematic?	(If need	led, explain	any ans	wers in Re	emarks.)		
SUMMARY OF I	FINDINGS -	- Attach	site ma	ıp showinç	g sampl	ing po	int location	ons, tr	ansects	s, important fea	atures	s, etc.
Hydrophytic Vegeta Hydric Soil Present Wetland Hydrology	ition Present? ? Present?	Yes X Yes X Yes X	No No No) 	ls ti witi	he Samı hin a We	oled Area tland?		Yes <u>X</u>	No		
Remarks:												
VEGETATION -	Use scienti	fic names	s of plai	nts.								
True Other true		0.01	``	Absolute	Dominant	t Indic	ator		. .			
<u>1 Populuo delteidi</u>		30	_)	% Cover	Species?			minanc	e lest wo	orksneet:		
1. Populus deltolde	50			15	Yes			mber of	Dominant	Species That	6	(A)
2. Acer negundo				10	Yes			UDL, F	ACVV, OF	FAC.	0	_(A)
5. Acer saccharinu	1111			20	res	FAC	To To	tal Numl	per of Don	ninant Species		

2. ////////////////////////////////////	10	100	171011	740 OBE, 171011,	011710.	-		_ (* ')
 Acer saccharinum 4. 	25	Yes	FACW	Total Number of Across All Strata:	Dominant :	Species	6	(B)
5.	70	=Total Cover		Percent of Domir Are OBL, FACW,	iant Specie , or FAC:	es That	100.0%	_(A/B)
Sapling/Shrub Stratum (Plot size: 15')	_				_		_
1. Fraxinus pennsylvanica	5	Yes	FACW	Prevalence Inde	x worksh	eet:		
2. Ligustrum sp.	4	Yes	FAC	Total % Cov	er of:	Mu	tiply by:	
3.				OBL species	0	x 1 =	0	-
4.				FACW species	65	x 2 =	130	-
5.				FAC species	34	x 3 =	102	-
	9	=Total Cover		FACU species	0	x 4 =	0	-
Herb Stratum (Plot size: 5')		_		UPL species	0	x 5 =	0	-
1. Carex sp.	20	Yes	FACW	Column Totals:	99	(A)	232	(B)
2.				Prevalence Inc	dex = B/A	= -	2.34	- ` '
3.								-
4.				Hydrophytic Ve	getation Ir	ndicators	:	
5.				1 - Rapid Tes	st for Hydr	ophytic V	egetation	
6.				X 2 - Dominand	ce Test is :	>50%	U	
7.				X 3 - Prevalence	e Index is	≤3.0 ¹		
8.				4 - Morpholo	gical Adap	tations ¹ (F	² rovide su	pporting
9.				data in Re	marks or c	on a sepai	rate sheet))
10.				Problematic	Hvdrophvt ⁱ	ic Vegeta	tion ¹ (Expl	ain)
	20	=Total Cover			lrio opil op	d wotland	hydrology	muot
Woody Vine Stratum (Plot size: 15')			be present, unles	s disturbe	d or probl	ematic.	must
1				Hydrophytic				
2.				Vegetation				
		=Total Cover		Present?	Yes <u>X</u>	No		
Remarks: (Include photo numbers here or on a sepa	rate sheet.)		•				

(inches) 0-12	Mathx		Redo	x realure	55			
0-12	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	10YR 2/1	85	10YR 3/6	25	С	М	Mucky Loam/Clay	
		<u> </u>		<u> </u>				
¹ Type: C=Cor	ncentration, D=Depl	etion, RM=F	Reduced Matrix, I	∕IS=Masł	ked Sand	l Grains	. ² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil Ir	ndicators:						Indicators f	or Problematic Hydric Soils ³ :
Histosol (/	A1)		Sandy Gle	yed Matr	ix (S4)		Coast P	rairie Redox (A16)
Histic Epip	pedon (A2)		Sandy Re	dox (S5)			Iron-Ma	nganese Masses (F12)
Black Hist	tic (A3)		Stripped N	latrix (S6	5)		Red Pa	rent Material (F21)
Hydrogen	Sulfide (A4)		Dark Surfa	ace (S7)			Very Sh	allow Dark Surface (F22)
Stratified I	Layers (A5)		Loamy Mu	cky Mine	eral (F1)		Other (E	Explain in Remarks)
2 cm Muc	k (A10)		Loamy Gle	eyed Mat	rix (F2)			
Depleted	Below Dark Surface	(A11)	X Depleted I	Matrix (F3	3)		2	
Thick Dar	k Surface (A12)		X Redox Da	rk Surfac	e (F6)		³ Indicators o	of hydrophytic vegetation and
Sandy Mu	ucky Mineral (S1)		Depleted I	Dark Surf	ace (F7)		wetland	hydrology must be present,
5 cm Muc	ky Peat or Peat (S3))	Redox De	pressions	s (F8)		unless o	disturbed or problematic.
Restrictive La	ayer (if observed):							
Туре:	N/A		_					
Depth (inc	ches):		_				Hydric Soil Present?	Yes X No
IYDROLOG	GY							
Wetland Hyd	rology Indicators:							
Primary Indica	<u>ators (minimum of or</u>	ne is require	d; check all that	apply)				
X Surface W	Vater (A1)		X Water-Sta				Secondary I	ndicators (minimum of two required
	er Table (A2)			ined Leav	ves (B9)		Secondary I Surface	ndicators (minimum of two required Soil Cracks (B6)
X High Wate	(Aquatic Fa	ined Leav auna (B13	ves (B9) 3)		<u>Secondary I</u> Surface X Drainag	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10)
X High Wate	n (A3)		Aquatic Fa	auna (B13 tic Plants	ves (B9) 3) s (B14)		Secondary I Surface X Drainag Dry-Sea	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2)
X High Wate X Saturation X Water Ma	n (A3) Irks (B1)		Aquatic Fa	ined Leav auna (B1: tic Plants Sulfide C	ves (B9) 3) s (B14))dor (C1)		<u>Secondary I</u> Surface X Drainag Dry-Sea Crayfish	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8)
X High Wate X Saturation X Water Ma Sediment	n (A3) ırks (B1) Deposits (B2)		Aquatic Fa	ined Leav auna (B13 itic Plants Sulfide C Rhizospho	ves (B9) 3) s (B14) Odor (C1) eres on L	iving Ro	Secondary I Surface X Drainag Dry-Sea Crayfish poots (C3)	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) b Burrows (C8) on Visible on Aerial Imagery (C9)
X High Wate X Saturation X Water Ma Sediment Drift Depo	n (A3) irks (B1) Deposits (B2) osits (B3) or Cruat (B4)		Aquatic Fa True Aqua Hydrogen Oxidized F Presence	ined Leav auna (B13 tic Plants Sulfide C Rhizospho of Reduc p Reduc	ves (B9) 3) s (B14) Odor (C1) eres on L ed Iron (iving Ro C4)	Secondary I Surface X Drainag Dry-Sea Crayfish Doots (C3) Saturati	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
X High Wate X Saturation X Water Ma Sediment Drift Depo Algal Mat	n (A3) Irks (B1) Deposits (B2) osits (B3) or Crust (B4)		Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	ined Leav auna (B13 sulfide C Rhizospho of Reduc n Reduct	ves (B9) 3) s (B14) Odor (C1) eres on L ed Iron (tion in Til) Living Ro C4) Ied Soil:	Secondary I Surface X Drainag Dry-Sea Crayfish pots (C3) Saturati Stunted s (C6) X Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
X High Wate X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo	n (A3) Irks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Viciblo on Aprial In	aggory (B7)	Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Leav auna (B13 tic Plants Sulfide C Rhizospho of Reduc n Reduct Surface	ves (B9) 3) s (B14) Odor (C1) eres on L red Iron (tion in Til (C7)	iving Ro C4) Ied Soil:	Secondary I Surface X Drainag Dry-Sea Crayfish poots (C3) Saturati Stunted s (C6) X Geomod FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2) eutral Test (D5)
X High Wate X Saturatior X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatior Snarsely V	n (A3) Irks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial In	nagery (B7) Surface (B8	Aquatic Fa	ined Leav auna (B13 tic Plants Sulfide C Rhizospho of Reduct n Reduct Surface Well Data	ves (B9) 3) 5 (B14) Odor (C1) eres on L ed Iron (tion in Til (C7) a (D9) emarks)) Living Ro C4) Ied Soil:	Secondary I Surface X Drainag Dry-Sea Crayfish Sots (C3) Saturati Stunted s (C6) X Geomod FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2) eutral Test (D5)
X High Wate X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V	n (A3) Irks (B1) Deposits (B2) Desits (B3) or Crust (B4) Desits (B5) n Visible on Aerial In Vegetated Concave	nagery (B7) Surface (B8	Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp	ined Leav auna (B1 tic Plants Sulfide C Rhizospho of Reduct n Reduct Surface Well Data blain in R	ves (B9) 3) s (B14) Ddor (C1) eres on L ed Iron (tion in Til (C7) a (D9) emarks)	iving Ro C4) Ied Soil:	Secondary I Surface X Drainag Dry-Sea Crayfish Saturati Stunted s (C6) X Geomon FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2) eutral Test (D5)
X High Wate X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V Field Observ.	n (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial In Vegetated Concave ations: r Precent?	nagery (B7) Surface (B8	Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp	ined Leav auna (B1 tic Plants Sulfide C Rhizospho of Reduc n Reduc Surface Well Data blain in R	ves (B9) 3) s (B14) Odor (C1) eres on L ed Iron (tion in Til (C7) a (D9) emarks)	iving R(C4) Ied Soil:	Secondary I Surface X Drainag Dry-Sea Crayfish oots (C3) Saturati Stunted s (C6) X Geomon FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2) eutral Test (D5)
X High Wate X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely Field Observ Surface Wate	n (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial In Vegetated Concave rations: ur Present? Yes	nagery (B7) Surface (B8	Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp No	ined Leav auna (B1 tic Plants Sulfide C Rhizospho of Reduc n Reduct Surface Well Data olain in R	ves (B9) 3) s (B14) Odor (C1) eres on L eres on L ied Iron (tion in Til (C7) a (D9) emarks) mches): probes):) Living Ro C4) led Soil:	Secondary I Surface X Drainag Dry-Sea Crayfish boots (C3) Saturati Stunted s (C6) X Geomol FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) b Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2) eutral Test (D5)
X High Wate X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V Field Observa Surface Water Water Table F Saturation Pre	n (A3) Irks (B1) Deposits (B2) Deposits (B3) or Crust (B4) Deposits (B5) n Visible on Aerial In Vegetated Concave Tations: Ir Present? Yes Present? Yes	nagery (B7) Surface (B8 S X S X	Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp No No No No	ined Leav auna (B1 tic Plants Sulfide C Rhizospho of Reduc n Reduct Surface Well Data Data in R Depth (ir Depth (ir	ves (B9) 3) s (B14) Odor (C1) eres on L eed Iron (tion in Til (C7) a (D9) emarks) mches): mches): poches):) Living Ro C4) led Soil:	Secondary I Surface X Drainag Dry-Sea Crayfish Saturati Stunted s (C6) X Geomol FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2) eutral Test (D5)
X High Wate X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V Field Observ Surface Water Water Table F Saturation Pre (includes capi	n (A3) Irks (B1) Deposits (B2) Dosits (B3) or Crust (B4) or State (B4) or Visible on Aerial In Vegetated Concave rations: r Present? Yes esent? Yes esent? Yes esent? Yes	nagery (B7) Surface (B8 S X S X S X	Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp No No No	ined Leav auna (B1 tic Plants Sulfide C Rhizospho of Reduc n Reduct Surface Well Data blain in R Depth (ir Depth (ir Depth (ir	ves (B9) 3) s (B14) Odor (C1) eres on L eed Iron (tion in Til (C7) a (D9) emarks) mches): nches):	.iving Ro C4) Ied Soil: <u>10</u> 0	Secondary I Surface X Drainag Dry-Sea Crayfish Stunted s (C6) X Geomon FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2) eutral Test (D5) Present? Yes X No
X High Wate X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely Field Observ Surface Water Water Table F Saturation Pre (includes capi Describe Reco	n (A3) Irks (B1) Deposits (B2) posits (B3) or Crust (B4) or Sits (B5) n Visible on Aerial In Vegetated Concave ations: Ir Present? Yes Present? Yes esent? Yes esent? Yes illary fringe) orded Data (stream	nagery (B7) Surface (B8 S X S X gauge. mon	Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp No	ined Leav auna (B1 tic Plants Sulfide C Rhizospho of Reduc n Reduct Surface Well Data blain in R Depth (ir Depth (ir Depth (ir I photos	ves (B9) 3) s (B14) Odor (C1) eres on L ed Iron (tion in Til (C7) a (D9) emarks) mches): nches): previous	iving Ro C4) led Soil: <u>10</u> 0 0	Secondary I	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2) eutral Test (D5) Present? Yes X No
X High Wate X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely Field Observ Surface Water Water Table F Saturation Pre (includes capi Describe Reco	n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial In Vegetated Concave ations: r Present? Yes esent? Yes esent? Yes eillary fringe) orded Data (stream	nagery (B7) Surface (B8 S X S X gauge, mon	Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp No No No No No No No No No No	ined Lean auna (B1 tic Plants Sulfide C Rhizospho of Reduc n Reduct Surface Well Data Dain in R Depth (ir Depth (ir Depth (ir I photos,	ves (B9) 3) s (B14) Odor (C1) eres on L eed Iron (tion in Til (C7) a (D9) emarks): 	iving Ro C4) Ied Soil: 10 0 0 s inspec	Secondary I	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2) eutral Test (D5) Present? Yes X No
X High Wate X Saturation X Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V Field Observ Surface Water Water Table F Saturation Pre (includes capi Describe Reco Remarks:	n (A3) Irks (B1) Deposits (B2) Deposits (B3) or Crust (B4) In Visible on Aerial In Vegetated Concave ations: Ir Present? Yes esent? Yes esent? Yes esent? Yes orded Data (stream)	nagery (B7) Surface (B8 S X S X gauge, mon	Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp No No No No No itoring well, aeria	ined Lear auna (B1 tic Plants Sulfide C Rhizospho of Reduc n Reduct Surface Well Data Dain in R Depth (ir Depth (ir Depth (ir	ves (B9) 3) s (B14) Odor (C1) eres on L eed Iron (tion in Til (C7) a (D9) emarks) mches): previous	Living Ro C4) Ied Soil: 10 0 0	Secondary I Surface X Drainag Dry-Sea Crayfish Saturati Stunted Stunted Stunted Stunted FAC-Net Wetland Hydrology tions), if available:	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2) eutral Test (D5) Present? Yes X No

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Kipp No	orth			City/Co	unty:	Franklin Cou	nty		Sampling Date:	3/5/2020
Applicant/Owner:	Kipp						State:	ОН	Sampling Point:	Upland F
Investigator(s): Bryan	n Lombard			Section,	Towns	ship, Range:	T1N R	17W		
Landform (hillside, te	errace, etc.): Pl	lain			Local	l relief (conca	ve, conv	ex, none)	Covex	
Slope (%): 3	Lat: 40.0293	17		Long:	-82.94	15297			Datum:	
Soil Map Unit Name	Bennington s	ilt loam, 2 to 6	percent slopes				<u> </u>	WI class	ification: No	
Are climatic / hydrolo	ogic conditions	on the site typi	cal for this time of	year?	Yes	X No	D	(If no, ex	plain in Remarks.)	
Are Vegetation N	, Soil <u>N</u> , c	or Hydrology N	No significantly d	sturbed?	Are "N	Iormal Circur	nstances	s" present	? Yes <u>X</u> No)
Are Vegetation N	, Soil <u>N</u> , c	or Hydrology N	No naturally prob	ematic?	(If nee	eded, explain	any ans	wers in Re	emarks.)	
SUMMARY OF	FINDINGS -	- Attach site	e map showin	g sampli	ng po	oint locati	ons, tr	ansects	s, important fea	tures, etc.
Hydrophytic Vegeta Hydric Soil Present	ation Present?	Yes Yes	No <u>X</u> No X	Is th with	e Sam in a W	pled Area		Yes	No X	
Wetland Hydrology	Present?	Yes	No X	-						
Remarks:				<u> </u>						
VEGETATION -	Use scienti	fic names of	plants.	B						
			Absolute	Dominant	Indi	cator		_		

Tree Stratum	(Plot size:	30') <u>% C</u>	over	Species?	Status	Dominance Tes	st workshe	eet:		
 Populus deltoide 2. 	es		4	5	Yes	FAC	Number of Dom Are OBL, FACV	iinant Spec V, or FAC:	ies That	1	(A)
3. 4.							Total Number of Across All Strat	f Dominant a:	Species	3	(B)
5.			4	5	=Total Cover		Percent of Dom Are OBL, FACV	inant Spec V, or FAC:	ies That	33.3%	_(A/B)
<u>Sapling/Shrub Strat</u> 1. Lonicera sp.	um (Plot	size: 1	<u>,</u>) 4	5	Yes	FACU	Prevalence Ind	ex worksh	neet:		
2. Rosa multiflora				5	No	FACU	Total % Co	over of:	Mu	Itiply by:	
3.						<u> </u>	OBL species	0	x 1 =	0	_
4.							FACW species	0	x 2 =	0	
5.							FAC species	45	x 3 =	135	
			5	0	=Total Cover		FACU species	55	x 4 =	220	
Herb Stratum	(Plot size:	5')				UPL species	0	x 5 =	0	
1							Column Totals:	100	(A)	355	(B)
2.							Prevalence Ir	ndex = B/A	<u>ا = ا</u>	3.55	
3.											_
4.							Hydrophytic Ve	egetation I	ndicators	:	
5.							1 - Rapid Te	est for Hyd	rophytic V	egetation	
6.							2 - Dominar	nce Test is	>50%		
7.							3 - Prevaler	nce Index is	s ≤3.0 ¹		
8.							4 - Morphol	ogical Ada	ptations ¹ (I	Provide su	pporting
9.							data in R	emarks or	on a sepa	rate sheet)
10.							Problematic	: Hydrophy	tic Vegeta	tion ¹ (Expl	ain)
Woody Vine Stratur	n (Plot	size: 15	5')		=Total Cover		¹ Indicators of hy be present, unle	/dric soil ar	nd wetland ed or probl	hydrology	must
1. Vitis sp.			/	5	Yes	FACU	Hydrophytic				
2.							Vegetation				
			į	5	=Total Cover		Present?	Yes	No	Х	
Pomarke: (Include	nhoto numboro	horo or on a	a conarato ch	oot)							

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

Depth Matrix	Redox Features	ommin the absence of indicators.
(inches) Color (moist) % C	radio realities	Texture Remarks
6-12 10YR 3/3 100		
¹ Type: C=Concentration, D=Depletion, RM=Rev	duced Matrix, MS=Masked Sand Grains	. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Iron-Manganese Masses (F12)
Black Histic (A3)	Stripped Matrix (S6)	Red Parent Material (F21)
Hydrogen Sulfide (A4)	Dark Surface (S7)	Very Shallow Dark Surface (F22)
Stratified Layers (A5)	Loamy Mucky Mineral (F1)	Other (Explain in Remarks)
2 cm Muck (A10)	Loamy Gleyed Matrix (F2)	
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if observed):		
Type: N/A		
Depth (inches):		Hydric Soil Present? Yes No X
Romarks.		
HYDROLOGY		
HYDROLOGY Wetland Hydrology Indicators:		
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required;	check all that apply)	Secondary Indicators (minimum of two required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; Surface Water (A1)	<u>check all that apply)</u> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> Surface Soil Cracks (B6)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; Surface Water (A1) High Water Table (A2)	<u>check all that apply)</u> Water-Stained Leaves (B9) Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> Surface Soil Cracks (B6) Drainage Patterns (B10)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; Surface Water (A1) High Water Table (A2) Saturation (A3)	<u>check all that apply)</u> Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	<u>check all that apply)</u> Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	<u>check all that apply)</u> Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro	 <u>Secondary Indicators (minimum of two required)</u> Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	<u>check all that apply)</u> Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4)	 <u>Secondary Indicators (minimum of two required)</u> Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	<u>check all that apply)</u> Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Sots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	<u>check all that apply)</u> Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Dots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) FAC-Neutral Test (D5)

Sparsely Vegetated Co	oncave Surface (E	38) Other (E	Explain in Remarks)			
Field Observations:						
Surface Water Present?	Yes	No X	Depth (inches):			
Water Table Present?	Yes	No X	Depth (inches):			
Saturation Present?	Yes	No X	Depth (inches):	Wetland Hydrology Present?	Yes	No <u>X</u>
(includes capillary fringe)						
Describe Recorded Data (s	tream gauge, mo	onitoring well, ae	rial photos, previous inspecti	ons), if available:		
Remarks:						



APPENDIX C:

ORAM Dataforms

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

Instructions

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

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

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

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

Background Information

Name: Bryan Lombard	
Date:	
3/18/2020	
5500 New Albany Road, Columbus, OH, 43054	
Phone Number:	
614.775.4517	
e-mail address: blombard@embt.com	
Name of Wetland: Wotland D	
Vegetation Communit(ios):	
Forested/Emergent	
HGM Class(es):	
Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Exhibit 1	
Lat/Long or UTM Coordinate	
	40.030183 / -82.944290
	Northeast Columbus
County	Franklin
Township	Columbus
Section and Subsection	T1N R17W
Hydrologic Unit Code	050600011602
Site Visit	3/5/2020
National Wetland Inventory Map	No
Ohio Wetland Inventory Map	No
Soil Survey	Cardington silt loam, 2 to 6 percent slopes
Delineation report/map	
	Exhibit 6

Name of Wetland: Wetland B		
Wetland Size (acres, hectares):		0.06
Sketch: Include north arrow, relationship with other surface waters, vegetation zone	es, etc.	
Sketch: Include north arrow, relationship with other surface waters, vegetation zone See Exhibit 6	es, etc.	0.06
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 32.5	Category:	1 or 2 gray zone

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

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

8b	Mature forested wetlands. Is the wetland a forested wetland with	YES	NO
	50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast beight (dbb) generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Frie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is	Matter data suld be	Contra Ourantian On
	partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	evaluated for possible	Go to Question 90
	······································	Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland	Co to Ourotion Od	On the Ownertian 40
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEC	NO
90	vegetation communities, although non-native or disturbance tolerant	TES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
		Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	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.		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies	Watland abould be	Complete
	Counties). Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.)	Complete Quantitative	
	wongomory, van wort oto.j.	Rating	

Table 1. Characteristic plant species.	
--	--

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

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



toxic pollutants

nutrient enrichment

subtotal this page last revised 1 February 2001 jjm





1 or 2 gray zone

End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YESNO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	0
	Metric 2. Buffers and surrounding land use	8	8
	Metric 3. Hydrology	8	16
	Metric 4. Habitat	10.5	26.5
	Metric 5. Special Wetland Communities	0	26.5
	Metric 6. Plant communities, interspersion, microtopography	6	32.5
	TOTAL SCORE	32.5	Category based on score breakpoints 1 or 2 gray zone

Complete Wetland Categorization Worksheet.

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



End of Ohio Rapid Assessment Method for Wetlands.

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization		
X 7 · F 0	Background Information		
Version 5.0	Scoring Boundary Worksheet		
	Narrative Rating	Ohio EPA, Division of Surface Water	
	Field Form Quantitative Rating	Final: February 1, 2001	
	ORAM Summary Worksheet		
	Wetland Categorization Worksheet		

Instructions

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

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

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

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

Name: Bryan Lombard	
Date:	
3/5/2020	
Affiliation: FMH&T	
Address:	
5500 New Albany Road, Columbus, OH, 43054	
Phone Number:	
014.775.4517	
blombard@emht.com	
Name of Wetland: Wetland C	
Vegetation Communit(ies):	
Forested/Emergent	
HGM Class(es): Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Exhibit 1	
Lat/Long or UTM Coordinate	40.028828/ -82.944577
USGS Quad Name	
	Northeast Columbus
	Franklin
Section and Subsection	Columbus
Hydrologic Unit Code	Columbus T1N R17W
	Columbus T1N R17W 050600011602
Site Visit	Columbus T1N R17W 050600011602 3/5/2020
Site Visit National Wetland Inventory Map	Columbus T1N R17W 050600011602 3/5/2020 No
Site Visit National Wetland Inventory Map Ohio Wetland Inventory Map	Columbus T1N R17W 050600011602 3/5/2020 No No
Site Visit National Wetland Inventory Map Ohio Wetland Inventory Map Soil Survey	Columbus T1N R17W 050600011602 3/5/2020 No No

Name of Wetland: Wetland C		
Wetland Size (acres, hectares):		0.32
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		1
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Exhibit 6		0.32
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : //	<u>Orv:</u>	
Final score : 44 Categ	ory:	Modified 2

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has		
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Calegory 5 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
		3 wetland.	
3	Documented High Quality Wetland Is the wetland on record in	Go to Question 3	NO
5	Natural Heritage Database as a high quality wetland?		
		Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding	Watland is a Catagony	Co to Outortion 5
	waterrowi, neotropical songbird, or shorebird concentration areas?	3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and bydrologically isolated and either 1) comprised of	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or	Co to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO
-	significant inflows or outflows, 2) supports acidophilic mosses,		
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	3 wettand	
		Go to Question 7	
<u>7</u>	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
	Is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumpeutral pb (5.5-9.0)	Wetland is a Category	Go to Question 8a
	and with one or more plant species listed in Table 1 and the cover of	3 wetland	
	invasive species listed in Table 1 is <25%?		
80	"Old Growth Forest " Is the wotland a forested wotland and is the	Go to Question 8a	
ud	forest characterized by, but not limited to, the following characteristics:	123	
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	or numan-caused understory disturbance during the past 80 to 100 vears: an all-aged structure and multilavered caponies: aggregations of	Go to Question 8h	
	canopy trees interspersed with canopy gaps; and significant numbers		
	of standing dead snags and downed logs?		

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

Table 1. Characteristic plant species.	
--	--

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

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

Site: Kipp North - Wetland C









Modified Category 2

End of Quantitative Rating. Complete Categorization Worksheets.

2

3

of marginal quality

and of highest quality

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	2
	Metric 2. Buffers and surrounding land use	8	10
	Metric 3. Hydrology	13	23
	Metric 4. Habitat	13	36
	Metric 5. Special Wetland Communities	0	36
	Metric 6. Plant communities, interspersion, microtopography	8	44
	TOTAL SCORE	44	Category based on score breakpoints Modified Category 2

Complete Wetland Categorization Worksheet.

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



End of Ohio Rapid Assessment Method for Wetlands.

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization		
X 7 • F 0	Background Information		
Version 5.0	Scoring Boundary Worksheet		
	Narrative Rating	Ohio EPA, Division of Surface Water	
	Field Form Quantitative Rating	Final: February 1, 2001	
	ORAM Summary Worksheet		
	Wetland Categorization Worksheet		

Instructions

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

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

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

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

Background Information

Name: Brvan Lombard	
Date:	
3/5/2020	
Affiliation: EMH&T	
Address:	
5500 New Albany Road, Columbus, OH, 43054	
Phone Number: 614.775.4517	
e-mail address:	
blombard@emht.com	
Name of Wetland: Wetland D	
Vegetation Communit(ies): Forested	
HGM Class(es):	
Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Lang or LITM Coordinate	
	40.028703/ -82.94672
USGS Quad Name	Northeast Columbus
County	Franklin
Township	Columbus
Section and Subsection	T1N R17W
Hydrologic Unit Code	050600011602
Site Visit	3/5/2020
National Wetland Inventory Map	No
Ohio Wetland Inventory Map	No
Soil Survey	Bennington silt loam, 2 to 6 percent
Delineation report/map	Exhibit 6

Name of Wetland: Wetland D		
Wetland Size (acres, hectares):		0.01
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		
See Exhibit 6		
Comments, Narrative Discussion, Justification of Category Changes:		
	ory:	1

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

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

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

Table 1. Characteristic plant species.	
--	--

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

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

Site: Kipp North - Wetland D Rater(s): Bryan Lombard Date: 3/5/2020 Metric 1. Wetland Area (size). 0 0 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) Metric 2. Upland buffers and surrounding land use. 12 12 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) Intensity of surrounding land use. Select one or double check and average. 2b. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) Metric 3. Hydrology. 7 19 max 30 pts. Sources of Water. Score all that apply. subtotal Connectivity. Score all that apply. За. 3b. High pH groundwater (5) 100 year floodplain (1) Other groundwater (3) Between stream/lake and other human use (1) Part of wetland/upland (e.g. forest), complex (1) Precipitation (1) ~ ~ Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. Maximum water depth. Select only one and assign score. Semi- to permanently inundated/saturated (4) 3c. Regularly inundated/saturated (3) >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) ~ Seasonally saturated in upper 30cm (12in) (1) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score one or double check and average. None or none apparent (12) Check all disturbances observed Recovered (7) ditch point source (nonstormwater) Recovering (3) tile filling/grading Recent or no recovery (1) dike road bed/RR track weir dredging stormwater input other Metric 4. Habitat Alteration and Development. 6.5 25.5 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) Disturbance to the Habitat development. Select only one and assign score. 4h area shown in Excellent (7) Very good (6) 1980s aerial photos. Good (5) Old trail road Moderately good (4) observed in field. Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Check all disturbances observed Recovered (6) mowina shrub/sapling removal Recovering (3) grazing herbaceous/aquatic bed removal Recent or no recovery (1) clearcutting sedimentation selective cutting dredging woodv debris removal farming 5.5

toxic pollutants

nutrient enrichment





Category 1

End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	0
	Metric 2. Buffers and surrounding land use	12	12
	Metric 3. Hydrology	7	19
	Metric 4. Habitat	6.5	25.5
	Metric 5. Special Wetland Communities	0	25.5
	Metric 6. Plant communities, interspersion, microtopography	3	28.5
	TOTAL SCORE	28.5	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

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



End of Ohio Rapid Assessment Method for Wetlands.

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization		
X 7 • F 0	Background Information		
Version 5.0	Scoring Boundary Worksheet		
	Narrative Rating	Ohio EPA, Division of Surface Water	
	Field Form Quantitative Rating	Final: February 1, 2001	
	ORAM Summary Worksheet		
	Wetland Categorization Worksheet		

Instructions

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

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

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

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

Background Information

Name: Bryan Lombard	
Date:	
3/5/2020	
Affiliation:	
EMH&I	
Address: 5500 New Albany Road, Columbus, OH, 43054	
Phone Number:	
614.775.4517	
e-mail address:	
blombard@emht.com	
Name of Wetland: Wetland E	
Vegetation Communit(ies):	
Forested, Emergent	
HGM Class(es):	
Location of Wetland: include map. address. north arrow. landmarks. distances. roads. etc.	
See Exhibit 1	
Lat/Long or UTM Coordinate	40.029647 / -82.945459
USGS Quad Name	
	Northeast Columbus
County	Franklin
Township	Columbus
Section and Subsection	T1N R17W
Hydrologic Unit Code	050600011602
Site Visit	3/5/2020
National Wetland Inventory Map	No
Ohio Wetland Inventory Map	
Soil Survey	INO
	Bennington silt loam, 2 to 6 percent slopes
Delineation report/map	Exhibit 6

Name of Wetland: Wetland E		
Wetland Size (acres, hectares):		0.11
Sketch: Include north arrow, relationship with other surface waters, vegetation zones,	etc.	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, See Exhibit 6	etc.	
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 44	ategory:	Modified 2

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	Note: as of January 1, 2001, of the federally listed endangered or	Category 3 status	
	had critical habitat designated (50 CER 17 95(a)) and the piping ployer	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	an individual of, or documented occurrences of federal or state-listed	Water die e Osterer	Cata Outstien 2
	threatened or endangered plant or animal species?	3 wetland is a Category	Go to Question 3
		o wolland.	
		Go to Question 3	
3	Documented High Quality Wetland. Is the wetland on record in	YES	NO
	ivalural meritage Database as a nigh quality wetland?	Wetland is a Category	Go to Question 4
		3 wetland	
4	Significant Preading or Concentration Area Deep the wotland	Go to Question 4	
4	contain documented regionally significant breeding or nonbreeding	TES	
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		3 wetland	
		Co to Ouestion 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
-	in size and hydrologically isolated and either 1) comprised of	-	
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or	1 wetland	
	no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO
	significant inflows or outflows, 2) supports acidophilic mosses,	Wetlendie e Ceteneru	Cata Outstian 7
	cover 4) at least one species from Table 1 is present and 5) the	3 wetland is a Category	Go to Question 7
	cover of invasive species (see Table 1) is <25%?		
		Go to Question 7	
<u>7</u>	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	and with one or more plant species listed in Table 1 and the cover of	3 wetland	
	invasive species listed in Table 1 is <25%?	Co to Overtion Do	
82	"Old Growth Forest " Is the wetland a forested wetland and is the	VES	
0a	forest characterized by, but not limited to, the following characteristics:	120	
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	or numan-caused understory disturbance during the past 80 to 100 vears; an all-aged structure and multilavered caponies; addregations of	Go to Question 8h	
	canopy trees interspersed with canopy gaps; and significant numbers		
	of standing dead snags and downed logs?		

8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO
	elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status	Go to Question 9c
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	be derived wetland is hydrologically diffesticted (ho lakeward of dpland 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 vecetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant	Watland is a Catagony	Co to Question 90
	hanve species can also be present:	3 wetland	Co to Question se
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
		Wetland should be evaluated for possible Category 3 status	Go to Question 10
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
	characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	Wetland is a Category 3 wetland.	Go to Question 11
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Go to Question 11	
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami	Category 3 status	Rating
	Montgomery, Van Wert etc.).	Complete Quantitative Rating	

Table 1. Characteristic plant species.	
--	--

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

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

Site: Kipp North - Wetland E



last revised 1 February 2001 jjm





Modified Category 2

End of Quantitative Rating. Complete Categorization Worksheets.

2

3

of marginal quality

and of highest quality

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

ORAM Summ	ary Worksheet
------------------	---------------

		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	1
	Metric 2. Buffers and surrounding land use	12	13
	Metric 3. Hydrology	12	25
	Metric 4. Habitat	12	37
	Metric 5. Special Wetland Communities	0	37
	Metric 6. Plant communities, interspersion, microtopography	7	44
	TOTAL SCORE	44	Category based on score breakpoints Modified Category 2

Complete Wetland Categorization Worksheet.

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



End of Ohio Rapid Assessment Method for Wetlands.



EXHIBITS



Path: J:\20210139\GIS\Exhibit 1 - Location Map.mxd



Path: \\cmhdata01\project01\20210139\GIS\Exhibit 2 - USGS Map.mxd



Path: \\cmhdata01\project01\20210139\GIS\Exhibit 3 - Soils Map.mxd




Path: \\cmhdata01\project01\20210139\GIS\Exhibit 5 - NWI Map.mxd





PHOTOGRAPHS





Photograph No. 1

View of Wetland A facing north (EMH&T, 3/05/20)



Photograph No. 3

View of Wetland A facing east (EMH&T, 3/05/20)



Photograph No. 1

View of Wetland A facing south (EMH&T, 3/05/20)



Photograph No. 4

View of Wetland A facing west (EMH&T, 3/05/20)





Photograph No. 5

View of Wetland B facing north (EMH&T, 3/05/20)



Photograph No. 6





Photograph No. 7

View of Wetland B facing east (EMH&T, 3/05/20)



Photograph No. 8

View of Wetland B facing west (EMH&T, 3/05/20)





Photograph No. 9

View of Wetland C facing north (EMH&T, 3/05/20)



Photograph No. 10

View of Wetland C facing south (EMH&T, 3/05/20)





Photograph No. 11

View of Wetland C facing east (EMH&T, 3/05/20)

Photograph No. 12 View of Wetland C facing west (EMH&T, 3/05/20)





Photograph No. 13

View of Wetland D facing north (EMH&T, 3/05/20)



Photograph No. 14





Photograph No. 15

View of Wetland D facing east (EMH&T, 3/05/20)



Photograph No. 16

View of Wetland D facing west (EMH&T, 3/05/20)





Photograph No. 17

View of Wetland E facing north (EMH&T, 3/05/20)



Photograph No. 18





Photograph No. 19

View of Wetland E facing east (EMH&T, 3/05/20)



Photograph No. 20

View of Wetland E facing west (EMH&T, 3/05/20)





Photograph No. 21

View of Wetland F facing north (EMH&T, 3/05/20)



Photograph No. 22

View of Wetland F facing south (EMH&T, 3/05/20)



Photograph No. 23

View of Wetland F facing east (EMH&T, 3/05/20)



Photograph No. 24

View of Wetland F facing west (EMH&T, 3/05/20)





Photograph No. 25

View of Stream 1 facing downstream (EMH&T, 3/05/20)



Photograph No. 26



Photograph No. 27

View of Stream 1 substrate (EMH&T, 3/05/20)

View of Stream 1 facing upstream (EMH&T, 3/05/20)



Photograph No. 28

View of Stream 2 facing downstream (EMH&T, 3/03/21)





Photograph No. 29

View of Stream 2 facing upstream (EMH&T, 3/05/20)



Photograph No. 30





Photograph No. 31

View of Non-Jurisdictional Stormwater Ditch looking towards outlet pipe at Bridgeview Drive (EMH&T, 3/03/21)



Photograph No. 32

View of Non-Jurisdictional Stormwater Ditch looking into the woods (EMH&T, 3/05/20)





Photograph No. 33

View of Stream 3 facing downstream (EMH&T, 3/05/20)



Photograph No. 34

View of Stream 3 entering culvert (EMH&T, 3/05/20)



Photograph No. 35

View of Stream 3 facing upstream (beginning) (EMH&T, 3/05/20)



Photograph No. 36

View of Stream 3 substrate (EMH&T, 3/05/20)





Photograph No. 37

View of Stream 4 facing downstream (EMH&T, 3/05/20)



Photograph No. 38

View of Stream 4 substrate (EMH&T, 3/05/20)



Photograph No. 39

View of Stream 4 facing north (EMH&T, 3/05/20)



Photograph No. 40

View of Non-Jurisdictional Swale facing northeast (EMH&T, 3/03/21)





Photograph No. 41

View of Non-Jurisdictional Swale facing east (EMH&T, 3/03/21)



Photograph No. 42

View of Non-Jurisdictional Swale facing south (EMH&T, 3/03/21)



APPENDIX B:

USACE Approved Jurisdictional Determination



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

REPLY TO ATTENTION OF

April 21, 2021

Regulatory Division North Branch LRH-2020-448-SCR

APPROVED JURISDICTIONAL DETERMINATION

KIPP Columbus Foundation Victor J. Ferguson Secretary c/o Vorys, Sater, Seymour and Pease LLP 52 East Gay Street Columbus, Ohio 43215

Dear Mr. Ferguson:

I refer to the report titled *Kipp North Property Request for Approved Jurisdictinal Determination Report,* dated March 11, 2021 and submitted on your behalf by EMH&T. You have requested an approved JD for the aquatic resources located on the approximate 40-acre site. The property is located north of Agler Road and on the west side of Golf Green Drive in the City of Columbus, Franklin County, Ohio (40.0293, -82.9434). Your JD request has been assigned the following file number: LRH-2020-448-SCR. Please reference this number on all future correspondence related to this JD request.

The United States Army Corps of Engineers' (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328, including the amendments to 33 FFR 328.3 (85 Federal Register 22250), and 33 CFR 329. Section 404 of the Clean Water Act (Section 404) requires a Department of the Army (DA) permit be obtained prior to discharging dredged and/or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 (Section 10) requires a DA permit be obtained for any work in, on, over or under a navigable water.

The Navigable Waters Protection Rule, which became effective on June 22, 2020, was followed in this verification of Section 404 jurisdiction for the features located within the AJD boundary. Based upon a review of the submitted report and additional information available to us, this office has determined the approved JD boundary contains 1,972 linear feet of one (1) jurisdictional perennial stream (Stream 1) 33 CFR 328.3(a)(2) water. Additionally, the approved JD boundary contains 1,285 linear feet of three (3) non-jurisdictional ephemeral streams (Streams 2-4) excluded per 33 CFR 328.3 (b)(3), 0.856 acre of six (6) non-jurisdictional wetlands (Wetlands A-F) excluded per 33 CFR 328.3 (b)(1), 351 linear feet of one (1) stormwater ditch (Stormwater Ditch 1) and 134 linear feet of one (1) swale (Swale 1) both



excluded per 328.3 (b)(5).

Stream 1 is subject to regulation under Section 404 and if your proposed project is unable to avoid the discharge of dredged and/or fill material into Stream 1, you must obtain an authorization from this office. Therefore, Streams 2-4, Wetlands (A-F), Stormwater Ditch 1, and Swale 1 are not considered jurisdictional waters of the United States. However, you should contact the Ohio Environmental Protection Agency, Division of Surface Water, at (614) 664-2001 to determine state permit requirements. The aforementioned aquatic resources are depicted on the enclosed map titled "Delineation Map Exhibit 6" and listed in the enclosed AJD Table.

This jurisdictional verification is valid for a period of five (5) years from the date of this letter unless new information warrants revision of the delineation prior to the expiration date. This letter contains an approved JD for the subject site within the approved JD boundary. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the Great Lakes and Ohio River Division Office at the following address:

Appeal Review Officer United States Army Corps of Engineers Great Lakes and Ohio River Division 550 Main Street, Room 10524 Cincinnati, Ohio 45202-3222 Phone: (513) 684-2699 Fax: (513) 684-2460

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by. It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter.

This determination has been conducted to identify the limits of the Corps' Section 404 jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are United States Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

A copy of this letter will be provided to the Ohio Environmental Protection Agency at Lazarus Government Building, Post Office Box 1049 Columbus, Ohio 43216-3669 and your agent, Mr. Bryan Lombard with EMH&T. If you have any questions concerning the above,

please contact Cecil Cox of the North Branch at 304-399-5274, by mail at the above address, or by email at cecil.m.cox@usace.army.mil.

Sincerely,

Landmon

Lauric A. Moore Regulatory Project Manager North Branch

Encls cc: Bryan Lombard (via email)



I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 4/21/2021 ORM Number: LRH-2020-448-SCR Associated JDs: N/A

Review Area Location¹: State/Territory: Ohio City: Columbus County/Parish/Borough: Franklin Center Coordinates of Review Area: Latitude 40.0293 Longitude -82.9434

II. FINDINGS

- **A. Summary:** Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.
 - □ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
 - □ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
 - There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
 - There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)²

			(0 /	
§10 Name	§ 10 Size	;	§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters): ³						
(a)(1) Name	(a)(1) Siz	e	(a)(1) Criteria	Rationale for (a)(1) Determination		
N/A.	N/A.	N/A.	N/A.	N/A.		

Tributaries ((a)(2) waters):								
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination				
Stream 1	1972	linear feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	Stream 1 is a perennial tributary to Alum Creek, an (a)(2) water an direct tributary to the Scioto River, an (a)(1) TNW, in a typical year (reference Section III B of this AJD form) at a location outside the area of interest (AOI), (reference Section III B of this AJD form).				

¹ Map(s)/figure(s) are attached to the AJD provided to the requestor.

² If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.

³ A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.



Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):						
(a)(3) Name	(a)(3) Siz	ze	(a)(3) Criteria	Rationale for (a)(3) Determination		
N/A.	N/A.	N/A.	N/A.	N/A.		

Adjacent wetlands ((a)(4) waters):							
(a)(4) Name (a)(4) Size			(a)(4) Criteria	Rationale for (a)(4) Determination			
N/A.	N/A.	N/A.	N/A.	N/A.			

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)): ⁴							
Exclusion Name	Exclusior	n Size	Exclusion ⁵	Rationale for Exclusion Determination			
Wetland A	0.35	acre(s)	(b)(1) Non- adjacent wetland.	Wetland A does not meet the definition of an adjacent wetland (33 CFR 328.3(c)(1)(i)-(iv)), is not considered a water of the United States per 33 CFR 328.3(b)(1), and is not subject to regulation under Section 404. Reference Section III B of this AJD form for typical year assessments.			
Wetland B	0.06	acre(s)	(b)(1) Non- adjacent wetland.	Wetland B does not meet the definition of an adjacent wetland (33 CFR 328.3(c)(1)(i)-(iv)), is not considered a water of the United States per 33 CFR 328.3(b)(1), and is not subject to regulation under Section 404. Reference Section III B of this AJD form for typical year assessments.			
Wetland C	0.32	acre(s)	(b)(1) Non- adjacent wetland.	Wetland C does not meet the definition of an adjacent wetland $(33 \text{ CFR } 328.3(c)(1)(i)-(iv))$, is not considered a water of the United States per 33 CFR 328.3(b)(1), and is not subject to regulation under Section 404. Reference Section III B of this AJD form for typical year assessments.			
Wetland D	0.01	acre(s)	(b)(1) Non- adjacent wetland.	Wetland D does not meet the definition of an adjacent wetland (33 CFR 328.3(c)(1)(i)-(iv)), is not considered a water of the United States per 33 CFR 328.3(b)(1), and is not subject to regulation under Section 404. Reference Section III B of this AJD form for typical year assessments.			
Wetland E	0.11	acre(s)	(b)(1) Non- adjacent wetland.	Wetland E does not meet the definition of an adjacent wetland (33 CFR 328.3(c)(1)(i)-(iv)), is not considered a water of the United States per 33 CFR 328.3(b)(1), and is not subject to regulation under Section 404. Reference			

⁴ Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area. ⁵ Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1)

exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.



				Section III B of this AJD form for typical year assessments.
Wetland F	0.006	acre(s)	(b)(1) Non- adjacent wetland.	Wetland F does not meet the definition of an adjacent wetland (33 CFR 328.3(c)(1)(i)-(iv)), is not considered a water of the United States per 33 CFR 328.3(b)(1), and is not subject to regulation under Section 404. Reference Section III B of this AJD form for typical year assessments.
Stream 2	666	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	Stream 2 is an ephemeral stream and meets the definition of "ephemeral" in paragraph (c)(3). Reference Section III B of this AJD form for typical year assessments.
Stream 3	502	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	Stream 3 is an ephemeral stream and meets the definition of "ephemeral" in paragraph (c)(3). Reference Section III B of this AJD form for typical year assessments.
Ctroom 4	117	lineer	(h)(2) Endometric	Ctroom 4 is an anhometral stream and we stath a

Stream 4	117	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	Stream 4 is an ephemeral stream and meets the definition of "ephemeral" in paragraph (c)(3). Reference Section III B of this AJD form for typical year assessments.
Stormwater Ditch	351	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	Drainage way 1 is an ephemeral feature and meets the definition of "ephemeral" in paragraph (c)(3). Reference Section III B of this AJD form for typical year assessments.
Swale 1	134	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	Drainage way 1 is an ephemeral feature and meets the definition of "ephemeral" in paragraph (c)(3). Reference Section III B of this AJD form for typical year assessments.

III. SUPPORTING INFORMATION

- A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.
 - Information submitted by, or on behalf of, the applicant/consultant: Kipp North Property Request for
 - Approved Jurisdictional Determination Report, dated April 10, 2020 and addendum dated 11 March 2021. This information Select. sufficient for purposes of this AJD. Rationale: N/A
 - Data sheets prepared by the Corps: Title(s) and/or date(s).
 - Photographs: Aerial and Other: Within referenced JD report.
 - \Box Corps site visit(s) conducted on: Date(s).
 - Previous Jurisdictional Determinations (AJDs or PJDs): N/A
 - Antecedent Precipitation Tool: *provide detailed discussion in Section III.B*.



- USDA NRCS Soil Survey: Franklin County, Ohio
- USFWS NWI maps: Title(s) and/or date(s).
- USGS topographic maps: 1:24K Northeast Columbus, OH Quad.

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Sources	Appendix B (USACE Wetland Data Forms) and Appendix C (ORAM Forms) of
	referenced report.

- B. Typical year assessment(s): A typical year occurs over a rolling thirty year period and includes the analysis of precipitation and other climatic variables to establish a normal period range (seasonally or annually) for a specific geographic region where the aquatic resource occurs. One point-in-time data source, 5 March 2020 and 2 March 2021, with a corresponding APT report, were included in the evaluation for the excluded features onsite. The antecedent precipitation tool was utilized to determine typical year for point-in-time data sources. Wetland adjacentcy was assessed on 5 March 2020 and 2 March 2021. Based on the antecedent precipitation tool, 5 March 2020 is included during the WebWIMP wet season and has a Palmer Drought Severity Index of (2.66) moderate wetness while 2 March 2021 is in the wet season has has a PDSI of (1.13) mild drought. The 30-day rolling total for precipitation was higher than the 30-year normal range on 5 March 2020 and . Site conditions on 5 March 2020 were wetter than normal and 2 March 2021 conditions were within normal of that in a typical year condition. Within normal sight conditions the wetlands had no adjacency and did not abut the (a)(2) stream located onsite. Additionally, the ephemeral features showed slight flows due to snow melt and recent rains.
- C. Additional comments to support AJD: The property is located outside of the FEMA 100 year floodplain.





APPENDIX C:

QHEI and HHEI Dataforms

ChicEPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet	QHEI Score:
---	-------------

Stream & Location: Stream 1	RM:	_ Date: 3	/5 /06
Aaron Acus-Souders Scorers Full Name & Affiliation	EMH&T		
<i>River Code: STORET #: Lat./ Long.:</i> 40 0308	8 /82	94528	Office verified
1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present Check BEST TYPES POOL RIFFLE OTHER TYPES BLDR /SLABS [10] HARDPAN [4] Image: Comparison of the comparison of	ONE (Or 2 &	QUALI QUALI □ HEAVY [□ MODERA □ NORMAL □ FREE [1] □ EXTENSI □ MODERA ○ NORMAL □ NONE [1]	ITY 2] TE [-1] [0] VE [-2] TE [-1] [0] Maximur 20
2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more comm quality; 2-Moderate amounts, but not of highest quality or in small amounts quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functiona 1 UNDERCUT BANKS [1] 1 OVERHANGING VEGETATION [1] 2 SHALLOWS (IN SLOW WATER) [1] 1 BOULDERS [1] 1 COGS OR WOODY DE ROOTMATS [1]	on of margin s of highest r, large Il pools. ERS [1] /TES [1] :BRIS [1]	AMOU Check ONE (O EXTENSIVE MODERATE SPARSE 5	JNT r 2 & average) >75% [11] 25-75% [7] 25% [3] SENT <5% [1] Cover Maximum 20
3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY HIGH [4] EXCELLENT [7] NONE [6] HIGH [3] MODERATE [3] GOOD [5] RECOVERED [4] MODERATE [2] LOW [2] FAIR [3] RECOVERING [3] LOW [1] NONE [1] POOR [1] RECENT OR NO RECOVERY [1]	1	1	Channel Maximum 20
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (C River right looking downstream RIPARIAN WIDTH FLOOD PLAIN QUAL	Dr 2 per bank	k & average) CONSERVATIO URBAN OR IND MINING / CONS e predominant la 00m riparian.	N TILLAGE [1] DUSTRIAL [0] TRUCTION [0] nd use(s) Riparian Maximum 10
5] POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH Check ONE (ONLY!) > 1m [6] 0.7-<1m [4] 0.4-<0.7m [2] 0.2-<0.4m [1] < 0.2m [0] Comments Comments CHANNEL WIDTH Check ONE (Or 2 & average) POOL WIDTH > RIFFLE WIDTH [2] POOL WIDTH > RIFFLE WIDTH [2] POOL WIDTH > RIFFLE WIDTH [2] MODERATE [1] Check ALL that apply Check ALL that apply NOT COMPANY Check ALL that apply Check ALL that apply Check ALL that apply Check ALL that apply NOT COMPANY Check ALL that apply Check ALL that apply Check ALL that apply Check ALL that apply MODERATE [1] Check ALL that apply Check ALL that apply Interstill Check ALL that apply Interstill Check ALL that apply Check ALL that apply Interstill Check ALL that apply Check ALL that apply Interstill Check ALL that apply Interstill	(ITIAL [-1] ITENT [-2] 1] iffles.	Recreation Primary Secondary (circle one and co	Potential Contact y Contact mment on back) Pool / Current Maximum 12
Indicate for functional riffles; Best areas must be large enough to support of riffle-obligate species: Check ONE (Or 2 & average). RIFFLE DEPTH RUN DEPTH RIFFLE / RUN SUBSTRATE RIF BEST AREAS > 10cm [2] MAXIMUM > 50cm [2] STABLE (e.g., Cobble, Boulder) [2] BEST AREAS 5-10cm [1] MAXIMUM < 50cm [1]	a popula FLE / RU □ N □ L □ M □ E	Ition N EMBEDDE IONE [2] OW [1] IODERATE [0] IXTENSIVE [-1]	RIFFLE [metric=0] EDNESS Riffle / Run Maximum 8
6] GRADIENT (58.4 ft/mi) □ VERY LOW - LOW [2-4] %POOL: 20 DRAINAGE AREA ☑ MODERATE [6-10] %RUN: 25 (0.6 mi ²) □ HIGH - VERY HIGH [10-6] %RUN: 25) %GLIDI)%RIFFLI	E: 30 E: 25	Gradient Maximum 10



Stream Drawing:

Phio Environmental Protection Agency	Primary Hea	dwater Hal	bitat Field Eva HHEl Score (su	luation Form um of metrics 1+2+	3) 33
SITE NAME/LOCATION	Stream 2				
SITE NUMBER	RIVER BASIN		RIVER CODE	DRAINAGE AREA (mi	a) N/A
LENGTH OF STREAM	REACH (ft) 200	40.029239	LONG82.94317	1 RIVER MILE	N/A
DATE 3/5/2020	SCORER AJA-S	COMMENTS	2429-923042003	75 KON 12279, 22 94	
NOTE: Complete All	tems On This Form - F	efer to "Field Eva	luation Manual for O	hio's PHWH Streams" f	or Instructions
STREAM CHANNEL		IONE / NATURAL CHAI			T OR NO RECOVERY
1. SUBSTRATE ((Max of 32). Ad	Estimate percent of ever Id total number of significa	y type present). Che nt substrate types for	ock ONLY <u>two</u> predominar und (Max of 8). Final metric	nt substrate <i>TYPE</i> boxes. c score is sum of boxes A &	B HHEI
TYPE	PERC	ENT TYPE		PERCENT	Metric
	ES [16 pts] (>256 mm) [16 pts]	— HH	LEAF PACK/WOODY D	EBRIS [3 pts]	Points
BEDROCK	[16 pts]	_ 66	FINE DETRITUS [3 pts]	Substrate
	65-256 mm) [12 pts]	66	CLAY or HARDPAN [0 p	ot]	Max = 40
GRAVEL (2	2-64 mm) [9 pts] 10		MUCK [0 pts]		13
SAND (<21	mm) [6 pts]		ARTIFICIAL [3 pts]		15
Total of Per Bidr Slabs, Bould SCORE OF TWO MOS	rcentages of ler, Cobble, Bedrock <u>0</u> FPREDOMINATE SUBSTR	(A) ATE TYPES: 9	TOTAL NUMBER OF	(B) SUBSTRATE TYPES: 4	A + B
2. Maximum Po	ol Dopth (Measure the ma	<u>kimum</u> pool depth	vithin the 61 meter (200	feet) cvaluation reach at the	Pool Depth
time of evaluat	ion. Avoid plunge pools fro	m road culverts or st	orm water pipes) (Che	ck ONLY one box):	Max = 30
> 30 centimeter	3 [20 pts] [30 pts]		5 cm - 10 cm [16 pts]	k:	5
> 10 - 22.5 cm	[25 pts]	ä	NO WATER OR MOIST	CHANNEL [Opts]	5
COMMENTS			MAXIMUM POOL	DEPTH (centimeters):	
3. BANK FULL V	/IDTH (Measured as the a	werage of 3 - 4 mea	surements) (Check O	NLYonebox):	Bankfull
> 4.0 meters (>	13') [30 pts] (> 9' 7"- 13') [25 pts]		> 1.0 m - 1.5 m (> 3' 3'')	' - 4' 8")[15 pts] 1	Max=30
> 1.5 m - 3.0 m	(> 4' 8" - 9' 7")[20 pts]		Zito in Colo flopia	,	
COMMENTS			AVERAGE BANK	FULL WIDTH (meters)	.2
		This information	mustalso be completed	1	
RIPARI	AN ZONE AND FLOODPL		OTE: River Left (L) and R	ight (R) as looking downstr	eam*
I D (Pe	RAN WIDTH er Bank)	FLOODPLAI	V QUALITY (Most Predor	ninant per Bank)	
	- 10m		at Matland		
	erate 5-10m	Immature F	orest. Shrub or Old Field		age
Narr	ow <5m	Residential,	Park, New Field	Open Pasture, Ri	ow Crop
None	•	Fenced Pas	ture	Mining or Constru	uction
COMME	NTS				
FLOW	REGIME (At Time of Evalu	ation) (Check ONL	Yone box):		
Stream F	lowing		Moist Channel,	isolated pools, no flow (inte	ermittent)
Subsurf	ace flow with isolated pools	(interstitial)	Dry channel, no	water (ephemeral)	
COMME	NIS atter snow m				
	NIT (Number of bends per	61 m (200 ft) of cha	nnei) (Check ONLY one	DOX):	
		1.5	2.5	□ >3	
STREAM GRA	DIENT ESTIMATE				
Flat (0.5 1/100 1)	Flat to Moderate	Moderate (2 1/100 1) Moderate to S	Severe Severe	e (10 11/100 11)
	(1970) I.	- 1995 - 1995 - 1995	01 03550	301 pc 701	

October 2018 Revision

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? Ves No QHEI Score (If Yes, Attach Completed QHEI form)
DOWNSTREAM DESIGNATED USE(S)
Distance fromEvaluated 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: Northeast Columbus NRCS Soil Map Page: NRCS Soil Map Stream Order:
County: Franklin Township/City: Columbus
MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: 3/4/2020 Quantity: 0.03 Photo-documentation Notes:
Elevated Turbidity?(Y/N): <u>N</u> Canopy (% open): <u>20</u> Were samples collected for water chemistry?(Y/N): <u>N</u> Lab Sample # or ID (attach results): Field Measures: Temp (*C) Dissolved Oxycen (mo/l) pH (S IL) Conductivity (umbos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, explain:
Additional comments/description of pollution impacts:
BIOLOGICAL OBSERVATIONS (Record all observations below)
Fish Observed? (Y/N) N Species observed (if known):
Frogs or Tadpoles Observed? (Y/N) N Species observed (if known):
Salamandare Obsanued2 (V/N) N Spanies obsanued (if known)
Aquatic Macroinvertebrates Observed? (Y/N) Species observed (if known):
Comments Regarding Biology: none observed

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 Field Evaluation Form HHEI Score (sum of metrics 1+2+3)	8		
SITE NAME/LOCATION Stream 3 SITE NUMBER			
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO	RECOVERY		
1. SUBSTRATE (Estimate percent of every type 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 BLDR SLABS [16 pts] Image: Complexity of the percent of every type present). Check ONLY two predominant substrate TYPE boxes. 80 BLDR SLABS [16 pts] Image: Complexity of the percent of every type present). Check ONLY two predominant substrate TYPE boxes. 80 BLDR SLABS [16 pts] Image: Complexity of the percent of every type present. Image: Complexity of the percent of every type present. 80 BUDR SLABS [16 pts] Image: Complexity of the percent of every type present. Image: Complexity of the percent of every type present. 80 BUDR SLABS [16 pts] Image: Complexity of the percent of every type present. Image: Complexity of the percent of every type present. 80 BEDROCK [16 pts] Image: Complexity of the percent of every type present. Image: Classity of the percent of every type present. 80 GRAVEL (2-64 mm) [9 pts] Image: Classity of the percent of every type present. Image: Classity of the percent of every type present. Image: Classity of the percent of every type present. SAND (<2 mm) [6 pts]	HHEI Metric Points Substrate Max = 40		
Total of Percentages of 0 (A) (A) Bidr Siabs, Boulder, Cobble, Bedrock 0 (A) (A) (B) 2 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	A + B		
Z Internet of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 contimeters [20 pts] 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] 7 < 5 cm [5pts]	Max = 30		
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]	Bankfull Width Max=30		
COMMENTS AVERAGE BANKFULL WIDTH (meters) 1.0			
This information <u>must</u> also be completed			
RIPARIAN WIDTH FLOODPLAIN QUALITY (Most Predominant per Bank) L R (Per Bank) L R L R V Widc >10m V Mature Forest, Wetland Conservation Tillage Moderate 5-10m Immature Forest, Shrub or Old Field Urban or Industrial Narrow <5m	2		
)		
0.5 0.5 1.5 2.5 STREAM GRADIENT ESTIMATE Flat (0.5 10 10) Flat to Moderate ✓ Moderate (2 10100 10) Moderate to Severe	n)		

October 2018 Revision

ADDITIONAL STREAM INFORMATION (T	his 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 fromEvaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE I	ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.
County:_FranklinTov	wnship/City: Columbus
MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: Photo-documentation Notes:	
Elevated Turbidity?(Y/N): <u>N</u> Canopy (% open): <u>35</u> Were samples collected for water chemistry?(Y/N): <u>N</u> Field Measures:Temp (°C) Dissolved Oxygen (mg/l)	Lab Sample # or ID (attach results): pH (S.U.) Conductivity (umhos/cm)
Is the sampling reach representative of the stream (Y/N) \underline{Y}	If not, explain:
Additional comments/description of pollution impacts: Old drain	tile fed by storm water pipe, begins as undefined drainage way.
BIOLOGICAL OF	BSERVATIONS
(Record all obse	rvations below)
Fish Observed? (Y/N) N Species observed (if known):	
Frogs or Tadpoles Observed? (Y/N) N Species observed (if known):
Salamanders Observed? (Y/N) N Species observed (if kno	wn) <u>.</u>
Aquatic Macroinvertebrates Observed? (Y/N) N Species ob	served (if known):
Comments Regarding Biology: none observed	

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 Head	water Habitat Field Eva HHEI Score (s	aluation Form um of metrics 1+2+3) 56		
SITE NAME/LOCATION Stream Mitigation				
SITE NUMBER RIVER BASIN	RIVER CODE	DRAINAGE AREA (mi²) N/A		
LENGTH OF STREAM REACH (ft) 200 LAT	LONG	RIVER MILE N/A		
DATE SCORER	COMMENTS			
NOTE: Complete All Items On This Form Ref	ar to "Eield Evaluation Manual for (bio's DHWH Streams" for Instructions		
STREAM CHANNEL MODIFICATIONS:				
SUBSTRATE (Estimate percent of every transmission (Max of 32). Add total number of significant s TYPE PERCEN BLDR SLABS [16 pts]	Image: system is a straight of the	ht substrate TYPE boxes. ic score is sum of boxes A & B <u>PERCENT</u> 45 DEBRIS [3 pts] pt] HHEI Metric Points Substrate Max = 40 16		
Total of Percentages of Bidr Slabs, Boulder, Cobble, Bedrock 10 SCORE OF TWO MOST PREDOMINATE SUBSTRAT	(A) TOTAL NUMBER OF	(B) A + B SUBSTRATE TYPES: 4		
 Maximum Pool Depth (Measure the maxim time of evaluation. Avoid plunge pools from r 	num pool depth within the 61 meter (200 pad culverts or storm water pipes) (Che	offeet) evaluation reach at the Pool Depth		
> 30 centimeters [20 pts]	5 cm - 10 cm [16 pts]			
> 22.5 - 30 cm [30 pts]	< 5 cm [5pts]	25		
COMMENTS		L DEPTH (centimeters): 25		
3. BANK FULL WIDTH (Measuredas the ave	rage of 3 - 4 measurements) (Check C	DNLYonebox); Bankfull		
> 4.0 meters (> 13") [30 pts]	> 1.0 m - 1.5 m (> 3° 3	" - 4" 8")[15 pts] Width		
> 3.0 m - 4.0 m (> 9' 7"- 13') [25 pts]	≤ 1.0 m (≤ 3' 3") [5 pts	s] Max=30		
21.5 m - 5.0 m (24 0 - 5 7 /[20 pts]		15		
COMMENTS	AVERAGE BANK	(FULL WIDTH (meters) 1.2		
This information <u>must</u> also be completed				
RIPARIAN ZONE AND FLOODPLAIN	QUALITY * NOTE: River Left (L) and F	Right (R) as looking downstream*		
RIPARIAN WIDTH (Per Bank)	FLOODPLAIN QUALITY (Most Predo	ominant per Bank)		
	Natura Forest Watland			
Moderate 5-10m	Immature Forest, Shrub or Old Field	Urban or Industrial		
Narrow <5m	Residential, Park, New Field	Open Pasture, Row Crop		
None	Fenced Pasture	Mining or Construction		
COMMENTS				
FLOW REGIME (At Time of Evaluation	n) (Check ONLY one box):			
Stream Flowing Subsurface flow with isolated pools (in COMMENTS	terstitial) Moist Channel, n	isolated pools, no flow (intermittent) o water (ephemeral)		
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		
		Savara D Savara -		

October 2018 Revision

Page 1

ADDITIONAL STREAM INFORMATIO	N (This Information Must Also be Completed):
QHEI PERFORMED? TYes 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 fromEvaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING T	THE ENTIRE WATER SHED AREA. CLEARLY MARK THE SITE LOCATION.
USGS Quadrangle Name: Northeast Columbus	NRCS Soil Map Page: NRCS Soil Map Stream Order:
County:_Franklin	Township/City: Columbus
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipita	ition: Quantity:
Photo-documentation Notes:	
Elevated Turbidity?(Y/N): Canopy (% open):	
Were samples collected for water chemistry? (Y/N):	Lab Sample # or ID (attach results):
Field Measures:Temp (°C) Dissolved Oxygen (mg/	(I) pH (S.U.) Conductivity (umhos/cm)
Is the sampling reach representative of the stream (Y/N) $__$	If not, explain:
Additional comments/description of pollution impacts:	
BIOLOGICA (Record all	L OBSERVATIONS observations below)
Fish Observed? (Y/N) Species observed (if known):
Frogs or Tadpoles Observed? (Y/N) Species observ	ved (if known):
Salamanders Observed? (Y/N) Species observed (if	known);
Aquatic Macroinvertebrates Observed? (Y/N) Specie	s observed (if known):
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

