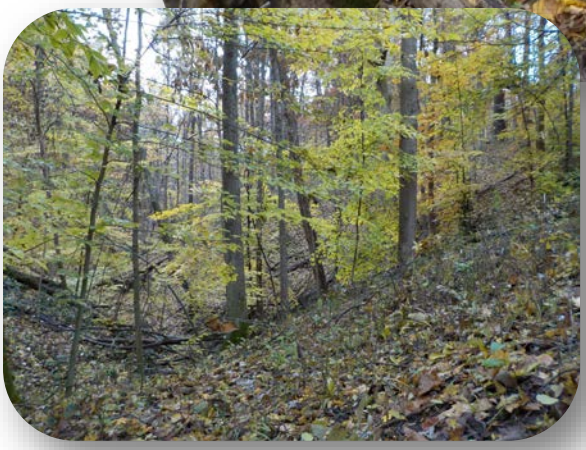
FLYING SQUIRELL PRESERVE

Application to the Clean Ohio Conservation Fund

NRAC District 17 – Program Year 14

Submitted by:

Morrow County Park District



SEPTEMBER 2019

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Natural Resources Assistance Council

OPWC District 17

INTRODUCTION AND PRELIMINARY SCREENER

1 Original of this document must be submitted as part of your application submission

Updated April 2019

PRINT IN **BLUE** INK ONLY

Applicant: Morrow County Park District

Entity Type: Park District
(County, Municipality, Township, Non-Profit, etc.)

Project Name: Flying Squirrel Preserve

Project Type: Acquisition
(Acquisition, Riparian Corridor/Watershed, etc.)

Parcel Number: D10-001-00-228-01 & 02

Contact Info: William Loebick
Name

(740) 358-9114
Phone Number

7590 New Delaware Road
Address

loebickb@yahoo.com
Email

Mt. Vernon, OH 43050
City, State, Zip Code

PART 1: PROJECT DESCRIPTION (attach response on separate sheet of paper)

BRIEFLY describe the scope of the project and identify the boundaries of the property or watershed area involved in this project. Sections **A-D** below should take up no more than one page total.

A. Purpose (provide a general description)
B. Location
C. Project Components
D. Status of Easements or Acquisition
E. Include Photos & Map of Project Area
(map and photos must clearly identify project limits and adjacent existing amenities)

PART 2: ESTIMATED TOTAL PROJECT COST: (25% match required)

Local Match $ 25,000.00 (The Trust for Public Land)

Other Match (specify all sources) $ 532,000.00 (land value donation)

Clean Ohio Grant Requested $ 1,596,000.00

Estimated Total Project Costs $ 2,153,000.00

Who provided the cost estimate? David Vasarhelyi, Sr. Project Manager, The Trust for Public Land
(Name, Title, Agency)

(216) 401-8072
(Phone Number)

PART 3: PROJECT EMPHASIS: (√ all that apply - project proposal must involve at least one of the following from A. or B. below. At least one of these criteria is required in order for the project to be eligible.

A. Open Space Acquisition (O.R.C. 164.22 (A))

_x_ Acquires land for parks.
_x_ Acquires land for public forests.
_x_ Acquires land for wetland preservation or restoration.
___ Acquires land for natural areas protecting endangered species.
_x_ Acquires land for other natural areas.
_x_ Acquires land for connecting corridors for natural areas.
_x_ Provides open space acquisition.
_x_ Provides permanent conservation easement.
___ Constructs or enhances facilities related to an open space acquisition made under Section 164.22A ORC., and necessary to make that open space area accessible & useable by the general public.

B. Riparian Corridors or Watershed Protection & Enhancement (O.R.C. 164.22 (B))

_x_ Protects or enhances riparian corridors or watersheds including the protection and enhancement of streams, rivers, and other waters of the state.

C. Other Characteristics: (√ if applicable)

___ Initiate or perpetuate hydromodification projects such as dams, ditch development, or channelization

___ Fund current legal obligations (such as fines, penalties, litigation expenses, mitigation or reclamation) under state or federal laws or local ordinances?

___ Fund facilities other than those required to provide public access to or use of open space?

___ Fund facilities for active recreation such as tennis courts, ball fields & recreation centers?

___ Fund projects that accelerate untreated water runoff?

___ Fund projects that encourage invasive nonnative species?

(If Yes to any of the above in C, the project is ineligible per Section 164.22 ORC)

GENERAL INFORMATION

Applicant must clearly demonstrate that the **primary purpose** of a proposed project must be to preserve high quality green space, protect stream corridors or enhance the water quality of a stream. Proposed projects shall emphasize these as the primary goals rather than as simply secondary benefits of the project.

Public access improvements to be funded by a proposed project must be located on the parcel being acquired and meet OPWC requirements over a two-year period

Proposed projects that do not obtain a mean minimal score from Council members of at least forty percent (40%) of the total possible maximum points that could be awarded by District 17 NRAC members will only be funded in full or in part upon a majority vote of Council members and are contingent upon funding availability.

Projects recommended for funding by the District 17 NRAC are final and cannot be substituted at a later date for alternative projects or funded beyond the limits of the original grant proposal.

No additional supporting documentation for or amendments to a proposed project will be accepted after the designated cut-off date for application submissions unless specifically requested of the applicant by the District 17 NRAC.

Applicant **MUST** have an **ODOT-certified appraiser,** who is credentialed in Value Analysis, review the property and provide a letter of review/letter of opinion/summary report no older than one (1) year from the date of the application deadline **PLUS** the County Auditor's appraised value of the property. Both **MUST** be submitted with the application. If the purchase price of the property is more than the appraised value, Applicant should submit other documentation with the application that would justify the purchase price of the property. A full appraisal is required upon funding approval.

Matching funds for the project **shall not** include any permanent structures, anything pre-existing or anything that the Clean Ohio grant would not otherwise purchase.

All information pertinent to the current Scoring Methodology must be included if the application is for Restoration or Enhancement of property previously acquired through CleanOhio Funds.

Applications shall be submitted on 8.5"x11" paper as: 1 Original, 12 Copies, plus 1 CD of all documents. Maps and photos may be of a larger format.

The Original shall be marked as so in the upper right-hand corner of the cover page.

Each of the 12 Copies and the Original shall be bound with a Binder Clip in the upper left-hand corner.

If more than one application is being submitted by an entity, the Priority of the project shall be listed in the upper right-hand corner of each of the 12 Copies. Example: "Priority #1, Priority #2, etc."

The Original shall include original blue ink signatures on the OPWC application pages and must be complete and submitted by the application deadline or the application shall be considered incomplete or ineligible and not scored.

Each of the 12 Copies and the Original shall be assembled in the following order: 1) Cover Page (optional); 2) All documentation as listed in the OPWC Application; 3) OPWC-Clean Ohio Fund-Green Space Conservation Program-Application For Financial Assistance; 4) All supporting documentation of the NRAC's Scoring Methodology; 5) Site maps, photos, etc.; 6) Any other documentation.

RESOURCES

Submit all application materials and/or questions to:

Angela Farley
OPWC District 17 NRAC Liaison
Licking County Planning and Development
20 South Second Street
Newark, Ohio 43055
740-670-5209
afarley@lcounty.com

OPWC Website:

www.pwc.state.oh.us

THANK YOU AND GOOD LUCK WITH YOUR PROJECT!

DO NOT WRITE BELOW THIS LINE

****

Applicant is an eligible entity?	YES	NO
Complete application received by the deadline?	YES	NO
Project is eligible per ORC 164.22?	YES	NO

OHIO NATURAL RESOURCES ASSISTANCE COUNCIL--DISTRICT 17

Introduction and Preliminary Screener —Program Year 14

Project Name: Flying Squirrel Preserve

Applicant: Morrow County Park District

Part 1: Project Description

A. Purpose (provide a general description)
Morrow County Park District, in partnership with The Trust for Public Land, is proposing to purchase in fee simple 234-acres of the former Buckhorn Camp property. The property is located in Chester Township, Morrow County, Ohio. Morrow County Park District is proposing to preserve this property in perpetuity in order to provide new passive recreational opportunities in an area largely underserved for access to outdoor recreation. The park will be named "Flying Squirrel Preserve" due to the large population of Southern Flying Squirrels on this heavily forested property that is one of the largest unprotected forested areas remaining in Morrow County.

B. Location
Flying Squirrel Preserve is in Chester Township, Morrow County Ohio. The 234-acre property is located east of Kunze Road (Township RD 176) and west of the terminus of Township RD 98 near Chesterville, Ohio.

C. Project Components
Morrow County Park District is proposing to preserve 2-parcels totaling 234-acres in Chester Township, Morrow County, Ohio. The project will protect in perpetuity 30 headwater streams, totaling over 20,000-linear feet (nearly 4 miles) and 12 wetlands totaling over 2-acres. The high-quality water resources are located within the Kokosing River watershed, a State Scenic River. Flying Squirrel Preserve will be owned and managed by Morrow County Park District. In addition to the abundant natural resources, a lodge located on the property will be available for public use and re-purposed for park activities.

D. Status of Easements or Acquisition
The protection of the natural resources on the Flying Squirrel Preserve is a joint project between The Trust for Public Land and Morrow County Park District. The Trust for Public Land has an option to purchase the property from the owners with acquisition possible within 6 months if Clean Ohio funds are awarded.

E. Include Photos & Maps of Project Area (maps and photos must clearly identify project limits and adjacent existing amenities)
Maps and photos of the project area, including site location map, US Geological Survey Map, and existing conditions site conditions map can be found in Appendix A. The existing conditions map includes location of all headwater streams and wetlands on the property. A photograph log can also be found in Appendix B.

Ohio Public Works Commission

Clean Ohio Fund - Green Space Conservation Program

Application for Financial Assistance

IMPORTANT: Please consult "Instructions for Financial Assistance", for guidance in completion of this form.

Applicant

Applicant: Morrow County Park District

District Number: 17 Subdivision Code: 117-14030 Date: 09/25/2019

Contact: William Loebick Phone: (740) 358-9114

(The individual who will be available during business hours and who can best answer or coordinate the response to questions)

Email: loebickb@yahoo.com FAX:

Project

Project Name: Flying Squirrel Preserve

County: Morrow Zip Code: 43050

Applicant Type

(Select one)

- ☐ County (1)
- ☐ City (2)
- ☐ Township (3)
- ☐ Village (4)
- ☐ Nonprofit Organization (10)
- ☐ Other (11) _____
- ☐ Conservation District (6)
- ☐ Soil & Water (7)
- ☐ Joint Recreational District (8)
- ☒ Park District / Authority (9)

Funding Request Summary

(Automatically populates from page 2)

Total Project Cost: 2,153,000 .00

Funding Requested: 1,596,000 .00

Project Emphasis

(Automatically populates from Attachment A)

Primary: Wetlands and scarce natural resources(4)

Secondary: Water quality (6)

NRAC Recommendation (To be completed by the NRAC)

NRAC Priority: _____

Amount: _____ .00

For OPWC Use Only

Status

Project Number: C _____

Release Date: _____

OPWC Approval: _____

Funding Summary

Grant Amount: _____ .00

Local Participation: _____ %

OPWC Participation: _____ %

1.0 Project Financial Information (All Costs Rounded to Nearest Dollar)

1.1 Project Estimated Costs

Acquisition

Fee Simple	a.)	2,128,000 .00			
Easement	b.)	.00			
Total Acquisition Costs			c.)	2,128,000 .00	

Planning and Implementation

Appraisal	d.)	2,900 .00			
Survey	e.)	.00			
Title Work	f.)	1,000 .00			
Closing Costs	g.)	3,000 .00			
Environmental Assessments	h.)	3,100 .00			
Other Biological Survey	i.)	15,000 .00			
		.00			
		.00			
		.00			
Total Planning and Implementation			k.)	25,000 .00	
Site Improvements			l.)	.00	
Permits, Advertising, Legal 0 %			m.)	.00	
Contingencies			n.)	.00	0 %
Total Estimated Costs			o.)	2,153,000 .00	100 %

1.2 Project Financial Resources

Local Resources

Local In-Kind or Force Account	a.)	.00			
Applicant Contributions	b.)	.00			
Other Public Revenues					
Land Water Conservation Fund	d.)	.00			
Nature Works	e.)	.00			
Ohio Environmental Protection Agency	f.)	.00			
Ohio Department of Natural Resources	g.)	.00			
Other	h.)	.00			
Private Contributions: (e.g. Land Donation)	i.)	557,000 .00			
Subtotal Local Resources			j.)	557,000 .00	26 %

Clean Ohio Funds

Funds this NRAC	k.)	1,596,000 .00			
Funds another NRAC	l.)	.00			
Subtotal Clean Ohio Funds			m.)	1,596,000 .00	74 %
Total Financial Resources			n.)	2,153,000 .00	100 %

1.3 Availability of Local Funds

Attach a statement signed by the *Chief Financial Officer* listed in section 5.2 certifying *all local resources* required for the project will be available on or before the earliest date listed in the Project Schedule section. The OPWC Agreement will not be released until the local resources are certified. Failure to meet local share may result in termination of the project. Applicant needs to provide written confirmation for funds coming from other funding sources.

1.4 Partnerships

List any partnership with other sources (i.e. is this part of a larger project or plan):

Morrow County Park Distirict will be responsible for both the managment of and protection of the natural resources at flying Squirrel Preserve. The Trust for Public Land is assisting Morrow County Park District with the purchase of Flying Squirrel Preserve. The Trust for Public Land has extensive experience in negotiating and completing land acquistions for public park purposes.

2.0 Project Schedule

2.1 Planning and Implementation	Begin Date:	07/01/2019	End Date:	05/31/2019
2.2 Land Acquisition / Easements	Begin Date:	06/01/2020	End Date:	06/30/2020
2.3 Site Improvements	Begin Date:		End Date:	

Failure to meet project schedule may result in termination of agreement for approved projects. Modification of dates must be requested in writing by project official of record and approved by the Commission once the Project Agreement has been executed.

3.0 Project Description

A: SPECIFIC LOCATION (Supply a written location description that includes the project boundries; although a map is required it does not replace this requirement. Include parcel numbers, noting if partial, and the number of deeds.) 1000 character limit.

Flying Squirrel Preserve is located in Chester Township in Morrow County; west of Kunze Road (Township RD 176) and east of the terminus of Township RD 98. The Morrow County Auditor identifies the project parcels as the following: permanent parcel number (PPN) D10-001-00-228-02, Township T.7 North, Range R.15 West, TWP Lot 9 In Survey with F14-1-56-01RTS:150701; and PPN D10-001-00/228-01, Township T.7 North, Range R.15 West, LOT 9 The Lodge In Survey with F14-1-56-02RTS:150701. The County Auditor lists one deed number (941/50) for both parcels.

B: PROJECT COMPONENTS (Describe the various components and attach proposed deed restrictions) 2,000 character limit.

Morrow County Park District is proposing to preserve 2-parcels totaling 234-acres in Chester Township, Morrow County Ohio. The project known as Flying Squirrel Preserve will protect in perpetuity 30 headwater streams, totaling over 20,000-linear feet and 12 wetlands totaling over 2-acres. The high-quality water resources are located within the Kokosing River watershed, a State Scenic River. Flying Squirrel Preserve will be owned and managed by Morrow County Park District.

The proposed deed restrictions have been included with this application.

C: Terms of Easements: 500 character limit.

Morrow County Park District will purchase Flying Squirrel Preserve fee simple with the associated encumbrances required of the Clean Ohio Fund. In accordance with Section 164.26 of the ORC, Morrow County Park District shall comply with all requirements for documentation of the project as necessary for the proper administration of the Clean Ohio Fund. Morrow County Park District understands that all Clean Ohio encumbrances are permanent in nature and are to be recorded as a deed restriction.

D: Access: (Location, if open to public, hours, public participation in planning process) 500 character limit.

Flying Squirrel Preserve will be open to the public every day of the year from dawn to dusk.

E: Ownership / Management / Operation: 500 character limit.

Morrow County Park District will own, maintain and operate the property once it is acquired. The Park District will provide the day-to-day maintenance, major maintenance and patrol of the property.

4.0 Project Officials

Changes in Project Officials must be submitted in writing from an officer of record.

4.1 Chief Executive Officer

(Person authorized in legislation to sign project agreements)

Name: William Loebick

Title: Board Chairman

Address: 7590 New Delaware Road

City: Mt. Vernon State: OH Zip: 43050

Phone: (740) 358-9114

FAX:

E-Mail: loebickb@yahoo.com

4.2 Chief Financial Officer

(Can not also serve as CEO)

Name: Jim Overmoyer

Title: Vice Chair and Treasurer

Address: 7590 New Delaware Road

City: Mt. Vernon State: OH Zip: 43050

Phone: (740) 358-9114

FAX:

E-Mail: jjovermoyer@gmail.com

4.3 Project Manager

Name: Dave Vasarhelyi

Title: Sr. Project Manager

Address: 1250 Old River Rd.

Suite 202

City: Cleveland State: OH Zip: 44113

Phone: (216) 401-8072

FAX: (216) 928-7519

E-Mail: dave.vasarhelyi@tpl.org

5.0 Attachments / Completeness review

Confirm in the boxes below that each item listed is attached (Check each box)

- [x] A certified copy of the authorization by the governing body of the applicant authorizing a designated official to sign and submit this application and execute contracts. This individual should sign under 6.0, Applicant Certification, below.
- [x] A certification signed by the applicant's chief financial officer stating the amount of *all local share* funds required for the project will be available on or before the dates listed in the Project Schedule section.
- [ ] A cooperative agreement (if the project involves more than one entity) which identifies the fiscal and administrative responsibilities of each participant.
- [x] Resolution of Support (Please refer to section 164.23(B)(1) of the Ohio Revised Code for guidance).
- [x] OPWC Proposed Declaration of Restrictions; also include restrictions for any other funding sources.
- [x] Information concerning the coordination and / or participation by local subdivisions, state agencies, federal agencies, community organizations, conservation organizations, and local business groups.
- [ ] For site improvements: Formal estimate by architect, landscape architect, or other professional, or quotes.
- [x] Supporting Documentation: Materials such as additional project description, photographs, and / or other information to assist your NRAC in ranking your project including supplements which may be required by your local NRAC. Appraisals must be in conformance with OPWC appraisal standards.

6.0 Applicant Certification

The undersigned certifies: (1) he/she is legally authorized to request and accept financial assistance from the Ohio Public Works Commission as identified in the attached legislation; (2) to the best of his/her knowledge and belief, all representations that are part of this application are true and correct; (3) all official documents and commitments of the applicant that are part of this application have been duly authorized by the governing body of the applicant; and, (4) should the requested financial assistance be provided, that in the execution of this project, the applicant will comply with all assurances required by Ohio Law, including those involving Buy Ohio and prevailing wages.

Applicant certifies that the project as defined in the application has NOT resulted in any transfer of title or rights to land or begun any type of physical improvements prior to the execution of a Project Agreement with the Ohio Public Works Commission. Action to the contrary will result in termination of the agreement and withdrawal of Ohio Public Works Commission funding.

William Loebick, Board Chairman

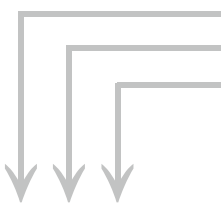
Certifying Representative (Printed form, Type or Print Name and Title)

William C. Loebick 9-24-19

Original Signature / Date Signed

Attachment A
Project Emphasis
(ORC 164.22)

Select the projects primary emphasis in the first column. If the project has more than one emphasis, then prioritize in order of decreasing emphasis using the second and third columns. Select one item for each column. You may add a supplemental sheet if you want to provide additional information on the project's value.



Primary (Most Important)
Secondary (Second most Important)
Tertiary (Third most Important)

☐	☐	☐	Supports comprehensive open space planning; Incorporates aesthetically pleasing and ecologically informed design
☐	☐	☐	Enhances economic development that relies on recreation and ecotourism in areas with relatively high unemployment and lower incomes
☐	☐	☐	Protects habitat for rare, threatened, and endangered species or the preservation of high quality, viable habitat for plant and animal species
☒	☐	☐	Preserves existing high quality wetlands or other scarce natural resources
☐	☐	☐	Enhances educational opportunities and provides physical links to schools and after-school centers
☐	☒	☐	Preserves or restores water quality, natural stream channels, functioning floodplains, wetlands, and/or streamside forests. Preserves or restores other natural features that contribute to the quality of life and to state's natural heritage
☐	☐	☐	Reduces or eliminates nonnative, invasive species of plants or animals
☐	☐	☐	Allows proper management of areas where safe fishing, hunting, and trapping may take place in a manner that will preserve a balanced natural ecosystem
☐	☐	☒	Increases habitat protection
☐	☐	☐	Included as part of a stream corridor-wide or watershed-wide plan
☐	☐	☐	Provides multiple recreational, economic, and aesthetic preservation benefits
☐	☐	☐	Preserves or restores floodplain and streamside forest functions
☐	☐	☐	Preserves headwater streams
☐	☐	☐	Restores and preserves aquatic biological communities

RESOLUTION NO. 9/9/2019

A RESOLUTION AUTHORIZING THE APPLICATION TO THE CLEAN OHIO CONSERVATION FUND FOR THE FORMER BUUCKHORN CAMP PROPERTY

WHEREAS, the Morrow County Park District Board of Park Commissioners desires the acquisition of approximately +/-338.52 acres of real property located at 7130 County Road 121, Fredericktown, Morrow County, Ohio, known as the former Buckhorn Camp Property;,

WHEREAS, the Clean Ohio Conservation Fund has monies available for eligible projects that provide for open space acquisition; and,

WHEREAS, the Morrow County Park District Board of Park Commissioners desires financial assistance from the Clean Ohio Conservation Fund administered with the assistance of The Trust for Public Land; and,

NOW THEREFORE BE IT RESOLVED, that the Morrow County Park District Board of Park Commissioners:

1. That the Board of Park Commissioners hereby authorizes the Board Chairman, William Loebick, or his designee to apply to the Ohio Public Works Commission (OPWC) for Clean Ohio Conservation Program funds for the purpose of acquiring certain real property in Morrow County, Ohio, and/or enhancing said real property; and
2. **FURTHER,** that William Loebick, Board Chairman, or his designee is authorized to enter into contract with OPWC on behalf of the Board of Park Commissioners should the requested grant funds be awarded; and
3. **FURTHER,** that William Loebick, Board Chairman, or his designee following review by counsel and contingent upon the availability of required funds, is authorized to execute a sale and/or purchase agreement for said property and/or to take such other actions as are appropriate to implement the intent of the Board in this matter.

ADDITIONALLY, that the Treasurer/Fiscal Officer for Morrow County Park District be directed to certify the amount of match funding required for the Clean Ohio grant, to be determined.

THIS RESOLUTION approved and adopted by the Board of Park Commissioners, Morrow County Park District, this 9th day of September, 2019, and is effective immediately.

Signed: The Board of Park Commissioners, Morrow County Park District

William Loebick, Chairman
Dixie Shmalley - Secretary
Jim Overmyer, Treasurer

DECLARATION OF RESTRICTIONS

This Declaration of Restrictions (this "Declaration") is made on this _____ day of _____, 2019 by Morrow County Park District, a Political Subdivision of the State of Ohio ("Declarant").

Recitals:

A. Declarant owns certain property located within Chester Township, Morrow County, Ohio as more particularly described on Exhibit A attached hereto and made a part hereof (the "Property").

B. Declarant applied for and has received a grant from the State of Ohio, acting by and through the Director of the Ohio Public Works Commission ("OPWC"), pursuant to Ohio Revised Code §164.20 et seq. (the "Grant"). In connection with Declarant's application for the Grant, Declarant proposed to use the Grant funds either for open space acquisition and related development or to protect and enhance riparian corridors, as set forth more specifically in its application.

C. As a condition to Declarant's receipt of the Grant, Declarant has agreed to restrict the use of the Property as set forth in this Declaration, with the intent that such restrictions run with the land.

NOW, THEREFORE, for valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Declarant, for itself and its successors and assigns as owners of the Property, hereby agrees as follows:

§1. Use and Development Restrictions. Declarant hereby agrees, for itself and its successors and assigns as owners of the Property, that the Property shall be utilized as public park and conservation land in perpetuity and shall be used only for the preservation, restoration, and management of open space and habitat; education; fishing, and other outdoor public recreation activities in accordance with all laws and the park rules and regulations to be adopted and implemented by Declarant. The property may contain trails and boardwalks, trail bridges, parking areas/trailheads, picnic areas, picnic shelters, hiking, nature viewing and fishing areas, educational and interpretive displays, and signage. Habitat restoration and erosion control measures may be implemented as necessary to protect and restore the Property's ecology. Existing buildings may be utilized and maintained as park maintenance facilities, programming spaces, public gathering spaces, and for storage of park related materials, park and volunteer offices, and to provide for visitor restroom facilities. Morrow County Park District will provide for maintenance and emergency access as necessary.

§2. Perpetual Restrictions. The restrictions set forth in this Declaration shall be perpetual and shall run with the land for the benefit of, and shall be enforceable by, OPWC. This Declaration and the covenants and restrictions set forth herein shall not be amended, released, extinguished or otherwise modified without the prior written consent of OPWC, which consent may be withheld in its sole and absolute discretion.

§3. Enforcement. If Declarant, or its successors or assigns as owner of the Property, should fail to observe the covenants and restrictions set forth herein, the Declarant or its successors or assigns, as the case may be, shall pay to OPWC upon demand, as liquidated damages, an amount equal to the greater of (a) two hundred percent (200%) of the amount of the Grant received by Declarant, together with interest accruing at the rate of six percent (6%) per annum from the date of Declarant's receipt of the Grant, or (b) two hundred percent (200%) of the fair market value of the Property as of the date of demand by OPWC. Declarant acknowledges that such sum is not intended as, and shall not be deemed, a penalty, but is intended to compensate for damages suffered in the event a breach or violation of the covenants and restrictions set forth herein, the determination of which is not readily ascertainable. OPWC shall have the right to enforce, by any proceedings at law or in equity, all restrictions, conditions and covenants set forth herein. Failure by OPWC to proceed with such enforcement shall in no event be deemed a waiver of the right to enforce at a later date the original violation or a subsequent violation.

§4. Restriction on Transfer of the Property. Declarant acknowledges that the Grant is specific to Declarant and that OPWC's approval of Declarant's application for the Grant was made in reliance on Declarant's continued ownership and control of the Property. Accordingly, Declarant shall not voluntarily or involuntarily sell, assign, transfer, lease, exchange, convey or otherwise encumber the Property without the prior written consent of OPWC, which consent may be withheld in its sole and absolute discretion.

§5. Separability. Each provision of this Declaration and the application thereof to the Property are hereby declared to be independent of and severable from the remainder of this Declaration. If any provision contained herein shall be held to be invalid or to be unenforceable or not to run with the land, such holding shall not affect the validity or enforceability of the remainder of this Declaration.

§6. Notices. Notices or other communication hereunder shall be in writing and shall be sent certified or registered mail, return receipt requested, or by other national overnight courier company, or personal delivery. Notice shall be deemed given upon receipt or refusal to accept delivery. Each party may change from time to time their respective address for notice hereunder by like notice to the other party. The notice addresses of the parties are as follows:

Declarant: Morrow County Park District
7590 New Delaware Road
Mt. Vernon, OH 43050
Attn: Board Chairman

OPWC: Ohio Public Works Commission
65 East State Street, Suite 312
Columbus, Ohio 43215
Attn: Director

§7. Governing Law. This Declaration shall be governed by, and construed in accordance with the laws of the State of Ohio.

Remainder of This Page Intentionally Blank

IN WITNESS WHEREOF, the Declarant has caused this Declaration of Restrictions to be executed this _____ day of _____, 2019.

DECLARANT:

_____

Name: William Loebick

Title: Board Chairman

STATE OF OHIO)
) SS
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ____ day of _____, 2019, by William Loebick, the Board Chairman of Morrow County Park District.

_____
Notary Public

This instrument was prepared by:

State of Ohio
Ohio Public Works Commission
65 E. State St., Suite 312
Columbus, OH 43215

OHIO NATURAL RESOURCES ASSISTANCE COUNCIL--DISRICT 17

SCORING METHODOLOGY—**PROGRAM YEAR 14** RANKING AMONG ALL PROJECTS_____

Project Name: Flying Squirrel Preserve

Applicant: Morrow County Park District

Reviewer: _____

Date: _____

ELIGIBLE PROJECT PER PRESCREENING: (YES) NO

- Applicant must clearly demonstrate that the **primary purpose** of a proposed project must be to preserve high quality green space, protect stream corridors or enhance the water quality of a stream. Proposed projects shall emphasize these as the primary goals rather than as simply secondary benefits of the project.

- Public access improvements to be funded by a proposed project must be located on the parcel being acquired and meet OPWC requirements over a two-year period

- Proposed projects that do not obtain a mean minimal score from Council members of at least forty percent (40%) of the total possible maximum points that could be awarded by District 17 NRAC members will only be funded in full or in part upon a majority vote of Council members and be contingent upon funding availability.

- Projects recommended for funding by the District 17 NRAC are final and cannot be substituted at a later date for alternative projects or funded beyond the limits of the original grant proposal.

- No additional supporting documentation for or amendments to a proposed project will be accepted after the designated cut-off date for application submissions unless specifically requested of the applicant by the District 17 NRAC.

- Applicant **MUST** have an **ODOT-certified appraiser,** who is ***credentialed in value analysis***, review the property and provide a letter of review/letter of opinion/summary report no older than one (1) year from the date of the application deadline **PLUS** the County Auditor's appraised value of the property. Both **MUST** be submitted with the application. If the purchase price of the property is more than the appraised value, Applicant should submit other documentation with the application that would justify the purchase price of the property. A full appraisal is required upon funding approval.

- Matching funds for the project **shall not** include any permanent structures, anything pre-existing or anything that the Clean Ohio grant wouldn't purchase

- All information pertinent to the current Scoring Methodology must be included if the application is for Restoration or Enhancement of property previously acquired through CleanOhio Funds.

NOTE: Where indicated, pro-rated or incremental scoring is allowed in one-half (1/2) point increments up to the maximum specified.

Project Name: Flying Squirrel Preserve Round 14

NRAC SCORING METHODOLOGY – PART I – (47 Points Maximum)

NRACs shall consider all of the following in approving or disapproving a grant: Does the project emphasize (documented in application) the following pursuant to Section 164.22 ORC? Applicant is required to specifically describe and document how the proposed project will address each of the following criteria as applicable. Unsubstantiated claims without credible documentation will not be scored. Acceptable supporting documentation shall include written statements from professionals and agencies, site photographs, aerial photos, soil surveys, detailed maps, letters, studies from knowledgeable sources, etc. **Pro-rated or incremental scoring is allowed in Part I.**

Up to a maximum of one (1) point each for numbers 1-5 and up to a maximum of two (2) points each for numbers 6-26. Please refer to the Glossary of Terms.

1. _____ **Restores other natural features that contribute to quality of life and the state's natural heritage.**
The preservation of Flying Squirrel Preserve does not include any restoration projects at this time.

2. _____ **Restores functioning floodplains.**
No floodplain restoration is currently proposed. The funding request is for preservation of the Flying Squirrel Preserve only.

3. _____ **Restores natural stream channels.**
Stream restoration projects are not proposed at the Flying Squirrel Preserve property.

4. _____ **Restores streamside forests.**
The preservation of Flying Squirrel Preserve does not currently include planting plans. After completing a more intensive study of Flying Squirrel Preserve, consulting the public and completing a management plan, Morrow County Park District will make further determinations as to planting plans.

5. _____ **Restores wetlands**.
No wetland restoration projects are currently proposed.

6. 2 **Protects habitat for rare, threatened, and endangered species.**
YES - The 234-acre Flying Squirrel Preserve property offers habitat for the federally endangered *Myotis sodalis* (Indiana bat), and the federally threatened *Myotis septentrionalis* (Northern long-eared bat). Both species of bat are typically found in a variety of woodland habitats following winter hibernation. Proper summer habitat characteristics include cavities, exfoliating or peeling bark, and split limbs. These characteristics can be found on live or dead trees. These trees are often located within riparian corridors, around ponds or within forest clearings.

Standing dead trees, mostly *Ulmus americana* (American Elm) and *Fraxinus* species (Ash) were observed within the on-site wetlands. In addition, tree species known to have exfoliating and/or peeling bark at maturity, such as *Carya ovata* (Shagbark Hickory), *Acer* species (Maple) and *Platanus occidentalis* (American Sycamore) are abundant. The majority of the Flying Squirrel Preserve is wooded, with an open understory.

Bats are most frequently observed along the riparian corridors of small and medium sized streams such as the fourteen (14) perennial and sixteen (16) intermittent / ephemeral streams found on the Flying Squirrel Preserve. The over 3-acre pond on-site also provides foraging habitat for bats.

#6 Continued:
The Ohio Department of Natural Resources (Ohio DNR), Division of Wildlife (DOW) lists two species of endangered mussel and four species of mussel as species of concern for Morrow County. In addition, the Ohio DNR's Kokosing Scenic River Watershed Plan (April 2004) indicates four state endangered aquatic species (*Ichthyomyzon greeleyi* (Mountain Brook Lamprey), *Etheostoma maculatum* (Spotted Darter), *Cryptobranchus alleganiensis* (Eastern Hellbender), *Lampsilis ovata* (Sharp-ridged Pocketbook)); the state threatened Etheostoma camurum (Bluebreast Darter) as well as four state species of special interest (*Moxostoma carinatum* (River Redhorse), *Hybopsis amblops* (Bigeye Chub), *Erimystax dissimilis* (Streamline Chub), *Ammocrypta pellucida* (Eastern Sand Darter) can be found within the Kokosing River watershed.

While the headwater streams on the Flying Squirrel Preserve offer minimal habitat for these listed species, they all flow directly to the Kokosing River. The watershed for Stream 27 consists of the far western third of the property. This perennial stream continues off the Flying Squirrel Preserve to the south were this water course confluences with other un-named tributaries, including Stream 24. This flow continues south of E. Sandusky Street (State Route 95) were the waters converge with another un-named stream channel (which includes the Stream 1 watershed) above the confluence with the Kokosing River.

The DOW also maintains a similar list of plant species of concern in Morrow County. The three potentially threatened species (*Cardamine dissecta* (Narrow-leaved Toothwort), *Platanthera psycodes* (Small Purple Fringed Orchid) and *Scirpus expansus* (Woodland Bulrush); and one threatened species *Glyceria acutiflora* (Sharp-glummed Manna Grass) have habitat requirements that include wetlands, ponds and stream terraces. All of these habitat types are present at Flying Squirrel Preserve.

7. 2 **Increases habitat protection for a variety on native species.**
YES - Preserving the diversity of plant communities across the Flying Squirrel Preserve from development will protect foraging, denning and nesting habitat for a variety of native species. The plant communities present include both hardwood and softwood forest, new field, riparian corridors, forested wetlands and emergent-marsh wetlands. The upland forest community is consistent with mixed-mesophytic woods. Dominant and associate species observed include *Quercus rubra* (Red Oak), *Acer rubrum* (Red Maple), F*agus grandifolia* (Beech), *Prunus serotina* (Black Cherry), *Liriodendron tulipifera* (Tulip) and *Carya ovata* (Shagbark Hickory). *Ulmus americana* (American Elm) and *Acer rubrum* (Red Maple) dominate the mixed swamp forest wetlands, including Wetlands D, F, G and H.

Wetland B and E received 60-points based upon the Ohio Environmental Protection Agency's (Ohio EPA) habitat evaluation the Ohio Rapid Assessment Method (ORAM). This high point value places within Category 3 range. Both Wetland B and E exhibit quality microtopographic habitat features such as coarse woody debris and amphibian breeding pools.

There is also 14-acres of old field community that provides quality habitat for pollinators. Species observed in this community include *Asclepias incarnata* (Swamp Milkweed), *Eupatorium maculatum* (Joe-pye Weed), *Solidago flexicaulis* (Zigzag Goldenrond) and *Symphyotrichum novae-angliae* (New England Aster). Wetland A is located within this community.

#7 Continued:
Both Pond 1 and Wetland K, which fringes Pond 1, offers vital habitat for reptiles, amphibians, shorebirds, wading birds and waterfowl. The surrounding forested upland provides a valuable protective buffer.

This diversity in vegetative cover as well as the vast number of aquatic resources on the Flying Squirrel Preserve, offers habitat for a wide of variety of native mammals, birds and amphibians.

8. 2 **Reduces or eliminates nonnative, invasive species of plants and animals.**
A Management Plan will be developed by Morrow County Park District after the property acquisition for the Flying Squirrel Preserve describing the invasive species management practices to be employed.

The coverage of non-native invasive plant species is minor considering the size of the subject property. Within the twelve (12) documented wetlands, invasive species were absent within the majority of the wetlands. Only minor areas of the invasive species *Phalaris arundinacea* (Canary Reed) were observed. Upland nuisance species, typical of the region such as *Alliaria petiolata* (Garlic Mustard) and *Rosa multiflora* (Multiflora Rose), were observed on-site.

9. 2 **Preserves high quality, viable habitat for plant and animal species.**
YES-The on-site wetlands were evaluated using the Ohio EPA's ORAM to classify the quality of the wetlands. Wetlands B and E scored within the threshold for a Category 3 wetland. Category 3 wetlands are defined by the Ohio EPA as having "superior habitat, hydrological or recreational functions" and are typified by "high levels of diversity, high proportion of native species and/or high functional values. The over 2-acres of wetlands as well as the over 20,000-linear feet of streams offer high-value amphibian and macro-invertebrate habitat.

A significant portion of the approximate 234-acre site is second growth woods with an open understory. The Category 2 and 3 wetlands, in combination with headwater streams, new field and upland woodlands, offer a diversity of viable habitats for a variety of native plant and animal species. Please see Appendix D for the completed ORAM sheets. A compilation of species observed on Flying Squirrel Preserve can be found within the attached Ecological Survey Report.

10. 2 **Restores and preserves aquatic biological communities.**
YES- The protection of the Flying Squirrel Preserve property includes preservation of aquatic biological communities. The aquatic habitats present on-site vary from seasonally inundated/to permanently inundated wetlands, seasonally flowing to permanently flowing streams and a 3-acre pond. The majority of the water resources have densely wooded buffers, which protect the quality of the on-site habitat.

11. 2 **Preserves headwater streams and adjacent lands within the watershed.**
YES- Flying Squirrel Preserve contains a total of thirty (30) headwater and primary headwater streams. Over 20,000-linear feet of stream was identified during the initial ecological study. These channels include ephemeral, small drainage warmwater streams and spring water perennial. The on-site streams were evaluated using the Ohio EPA's Primary Headwater Habitat Evaluation Index (HHEI). The dominate stream substrate types include cobble, gravel, boulders, sand and silt. Moderate to high quality instream cover was observed including root wads and logs. Down cutting in stream channels located on steep slopes was observed but most streams were stable. The completed HHEI forms can be in Appendix D.

12. 2 **Preserves functioning floodplains.**
YES - The headwater streams located on the Flying Squirrel Preserve have associated floodplains that will be preserved in perpetuity by Morrow County Park District. The headwater streams on the property have access to the surrounding floodplains, which are dominated by riparian forest communities and emergent wetlands.

13. 2 **Preserves natural stream channels.**
YES – Flying Squirrel Preserve contains a total of thirty (30) headwater and primary headwater streams which total 20,949 linear feet in length. These headwater streams are all part of the Mile Run-Kokosing River watershed (HUC 05040003 0202). The headwater streams cover all flow regimes from perennial, to intermittent and ephemeral. All are natural stream channels, with minor modifications to Streams 1, 26 and 27 for crossings and Streams 23 and 24 for the dam outlet.

The main substrate types within most of these channels are a highly stable mix of boulder, cobble and gravel. Instream habitats include deep pools, undercut banks, logs and other woody debris, and overhanging vegetation.

The highest HHEI scoring headwater streams were 7, 8, 27, 14 and 16 which all scored over 70-points, with the score for Stream 7 as the highest at 80-points. HHEI scores over 70-points indicate Spring Water, Perennial water sources. This type of primary headwater habitat stream is of the highest quality and require the maximum level of protection. The Ohio EPA defines spring water streams as exhibiting moderately diverse to highly diverse communities of cold water adapted native fauna present year-round.

Headwater streams of all types protect the long-term ecological integrity and ecosystem value of our natural environment – the preservation of the Flying Squirrel Preserve will assist in this goal of protecting water quality and public health. Please see Appendix D for the completed HHEI sheets.

14. 2 **Preserves streamside forests.**
YES - The streams within the Flying Squirrel Preserve have riparian buffer zones, the majority of which are dominated by second growth woods with sections of mature woods. These wooded areas consist of species such as *Acer rubrum (*Red Maple), *Acer saccharum* (Sugar Maple), *Platanus occidentalis* (Sycamore), and *Liriodendron tulipifera* (Tulip), *Fagus grandifolia* (Beech), Carpinus carliniana (American Hornbeam), Fraxinus pennsylvanica (Green Ash) and *Quercus* species (Oaks).

15. 2 **Preserves existing high quality wetlands. (MUST DOCUMENT QUALITY OF WETLANDS)**
YES - Wetlands B and E scored at the highest quality Ohio Rapid Assessment Method (ORAM) rating of Category 3 and are rated the highest quality of all wetlands on-site. Wetland B and E are located within the floodplain of Stream 1, a perennial stream. These wetlands provide important hydrologic functions such as flood retention and nutrient removal. Both wetlands also offer amphibian breeding pools.

Other wetlands on-site received an Ohio Rapid Assessment Method (ORAM) score placing them within the Category 2 wetland range. The Ohio Administrative Code defines Category 2 wetlands as wetlands which “support moderate wildlife habitat, dominated by native species and wetlands which are degraded, but have a reasonable potential for reestablishing lost wetland functions”.

16. 2 **Preserves other natural features that contribute to the quality of life and the state's natural heritage. (MUST IDENTIFY WHAT NATURAL FEATURES)**

YES - Preserving land such as the Flying Squirrel Preserve protects the surrounding community and the state's water and air while providing natural habitats and enhancing the quality of life. The state's natural heritage consists of land containing natural stream corridors, woodlands, wetlands and connector sites that link important water resources. The Flying Squirrel Preserve includes these types of resource features and its preservation will ensure that the state's biodiversity and water resources are protected from degradation that can be precipitated by development.

Because the Kokosing State Scenic River is located approximately 2-miles downstream from the Preserve and all of the Preserve's streams flow into the environmentally sensitive area, any development of the Preserve, could negatively impact this outstanding state water.

17. 2 **Preserves or restores water quality.**

YES – The over 2-ares of existing wetlands on-site will continue to naturally filter stormwater and improve water quality. The protection of the 30-headwater streams on-site will also preserve the overall quality of the Kokosing River watershed. The Ohio EPA 2018 Integrated Water Quality Monitoring and Assessment Report has two aquatic life use monitoring stations on the Kokosing River near the confluence of the project waters and the Kokosing River. Station R12S14 (Kokosing R. at Chesterville @ ST RT 314) is in full attainment of its Exceptional Warmwater use designation. And downstream Station 300212 (Kokosing @ Vail Rd) is in partial attainment of its Exceptional Warmwater use designation.

The exceptional warmwater aquatic life use designation is defined by the Oho EPA in the Ohio Administrative Code as the following: waters capable of supporting and maintaining an exceptional or unusual community of warmwater aquatic organisms.

18. 2 **Preserves other scarce natural resources within the geographical jurisdiction of the Council. (MUST IDENTIFY WHAT SCARCE NATURAL RESOURCES)**

YES – The surrounding area in this region of Ohio is predominantly farmland. On August 27, 2017, Rick Gardner, Chief Botanist, ODNR – Division of Natural Areas and Preserves, visited the property and identified it as one of the largest forested areas remaining in Morrow County. His field summary is attached in Appendix E. The surrounding farmland has been altered with tiled fields causing significant disruption to headwater streams. The property has nearly 4 miles of unaltered primary headwater streams allowing it to serve as a refuge and breeding area for amphibians and other wildlife allowing re-population for species that have been displaced by agricultural practices across most of Morrow County.

19. 2 **Acquires fee simple acquisition of lands to provide access to riparian corridors or watersheds or for other purposes necessary for the protection and enhancement of riparian corridors or watersheds.**

YES - After the fee simple acquisition of the Flying Squirrel Preserve, Morrow County Park District will allow access to the riparian corridors. Morrow County Park District will create a management plan after acquisition in order to determine the best use of the property, including potential park amenities, trail routes, and plant community maintenance.

20. 2 **Makes acquisitions of easements protecting and enhancing riparian corridors or watersheds.**
Morrow County Park District will acquire the 234-acre Flying Squirrel Preserve in fee simple and maintain the property in perpetuity in accordance with the Declaration of Restrictions that serves as the conservation easement. The existing water resources and upland communities will be sustainably managed while allowing the public access to this important natural area. As per the associated encumbrances required of the Clean Ohio Fund and in accordance with Section 164.26 of the Ohio Revised Code, Morrow County Park District will comply with all requirements for documentation of the project as necessary for proper administration of the Clean Ohio Fund.

21. 1 **Plants indigenous vegetation, including reforestation of land, to improve water quality. (MUST DESCRIBE HOW WATER QUALITY WILL BE IMPROVED AND WHAT VEGETATION TO BE PLANTED)**
Most of the property is forested and in a natural state. After completing a more intensive study of the Flying Squirrel Preserve, consulting the public and completing a management plan, Morrow County Park District will make further determinations as to planting plans. Any planting plans will include native vegetation.

22. 2 **Incorporates aesthetically pleasing and ecologically informed design including sensitivity to the terrain, natural resources, and heritage of the property. (MUST DESCRIBE SPECIFICALLY HOW THIS WILL BE DONE AND BY WHOM)**
The goal of this application is the purchase and preservation of Flying Squirrel Preserve. Following acquisition, the Park District will have the opportunity to extensively survey the property and obtain input from staff and the public regarding park development, removal or park use of structures and other improvement plans.

23. 2 **Enhances educational opportunities and provides links to schools and after-school centers. (MUST BE DOCUMENTED BY A SCHOOL OFFICIAL)**
YES – The Highland Local School District passed a resolution of support for the project which is attached in Appendix C. The school district intends to use the property for environmental education purposes as it currently must travel outside of the county to provide environmental study for its students.

24. 2 **Supports comprehensive open space planning. (A COPY OF THE PLAN IS NOT REQUIRED, BUT A STATEMENT FROM THE PUBLIC ENTITY HAVING JURISDICTION OVER THE PLAN IS REQUIRED)**
The Morrow County Comprehensive Land Use Plan (2012) recommends growth should be guided into designated areas, were the necessary infrastructure is already in place. These designated areas (along the Interstate 71 interchanges and surrounding the existing Villages) are best suited for development as the necessary infrastructures is already in place. This will allow the County to prioritize agriculture and ensure that natural resources are protected.

25. 2 **Provides public access for multiple passive recreational uses, economic, and aesthetic preservation benefits.**
YES - Flying Squirrel Preserve provides numerous ecological preservation benefits, starting with its diversity of ecotones that includes forest, high quality wetlands and numerous headwater streams. Recreational benefits include, but are not limited to, nature study (e.g., birding, dragonflies, wildflowers, and amphibians), hiking, picnicking, cross-country skiing, and fishing.

#25 Continued:
From an aesthetic preservation standpoint, this project will permanently protect second growth woods, riparian corridors, forested as well as emergent wetlands, and multiple headwater streams. The economic benefits of this project can be measured by an increase in neighboring residential property values as well as increase to the local ecotourism industry.

The property's wetlands and streams also provide economic as well as social benefits through stormwater retention and pollutant filtration. Saving Flying Squirrel Preserve from development will decrease sediment flows to downstream waters, namely the Kokosing River. Additionally, the Kokosing River watersheds is predominantly rural, and the residents rely on private wells for their water supply. By preserving the 234-acre Flying Squirrel Preserve, the water cycle will be preserved allowing ground water recharge to continue.

26. 2 **Allows proper management of areas where safe fishing, hunting, and trapping may take place in a manner that will preserve balanced natural ecosystems.**
YES - Morrow County Park District has established park rules for their existing park reservations which allows for use of the areas while protecting the natural resources. Fishing will be permitted. Hunting may be permitted when consistent with management goals such as deer management to prevent overpopulation.

PART I SCORE: 41

Project Name: Flying Squirrel Preserve Round 14

NRAC SCORING METHODOLOGY – Part II – (39 Points Maximum)

NRACs shall consider the following in approving or disapproving a grant request:

1. **Percentage of Clean Ohio grant funds requested to complete the project (check only one):**

_____	75%	(required)	_____	60-64%	(7 points)
3	70-74%	(3 points)	_____	less than 60%	(10 points)
_____	65-69%	(5 points)			

2. **Level of Coordination: Coordination means project carries out the goals of multiple agencies and organizations. Documentation stating how projects carry out the goals of the support agencies and/or organizations is required. (2 points each)**

2 pts. Local political subdivisions 2 pts State agencies 2 pts Federal agencies

2 pts Community organizations 2 pts. Conservation organizations

- **Letters of support explaining how the project meets the goals of the agencies and organizations are attached in Appendix C**

3. **Level of conservation coordination with other open space, riparian corridor, trails, farmland protection, or urban revitalization projects under the Clean Ohio Fund in other Public Works Commission Districts. (MUST BE DOCUMENTED). (Check all that apply.)**

_____	Is a joint project	(2 points)
2 pts	Carries out an adopted community, watershed or other plan overlapping another district	(2 points)

- **The project is located within the Muskingum Watershed Conservation District and supports the watershed conservation and headwater stream protection goals of the district.**

4. **Documented Community Benefits: Relative economic, social/passive recreational, and environmental benefits the proposed project will bring to the geographical area represented by the NRAC as compared to other projects. (On a scale of 0-5 points)**

5 pts

The acquisition of Flying Squirrel Preserve will provide both social and recreational benefits. The public will have access to the Flying Squirrel Preserve with recreational benefits provided by public trails including hiking, wildlife observation, nature study, and fishing.

County residents and beyond will directly benefit from the preservation of Flying Squirrel Preserve because its permanent protection will prevent residential development. Residential development in unincorporated areas such as Chester Township tend to cost the residents more (e.g., increased traffic, upgrades to infrastructure, increase in school age children) than it generates in taxes. The greatest social benefit seen from the conservation of this property will be the ones associated with the preservation of the existing wetlands and streams which will continue to provide flood retention, ground water recharge, well water field protection.

The over 200-acres of forest provide benefits such as offsetting greenhouse gas emissions, filtering of air pollutants and providing natural infiltration of stormwater by reducing runoff. The thirty (30) streams, with naturally vegetated corridors, provide flood storage and slow down the velocity of flood waters. Preserving these natural stream channels will prevent an increase in erosion and sedimentation of downstream waters which include the State Scenic Kokosing River.

Project Name: Flying Squirrel Preserve Round 14

5. **Clean Ohio Funding: Rate the cost effectiveness regarding the use of Clean Ohio funds for this project on a scale of 0-5.**

5 pts

The use of Clean Ohio Funds to purchase and preserve the Flying Squirrel Preserve is highly cost effective. The attached appraisal indicates the highest and best use of the property is a campground and park land. This project is cost effective when considering that habitat loss is the largest threat to most species' survival. The preservation of over 200 hundred acres of forest, riparian corridors, field and wetlands helps reduce that threat. Another measure of the cost effectiveness of this project is minimal opportunity costs. Beyond the costs of acquisition and management the Flying Squirrel Preserve project is not projected to have any burden or costs on the surrounding community. As the property is not in agricultural production, there will no loss of farmland or limits on livestock grazing.

6. **Project Site: Project is important to protect a site in a high development area based on documented population growth density of immediate area of project. (MUST BE DOCUMENTED). (On a scale of 0-5 points.) :**

5 pts

The Columbus metropolitan area was recently listed as one of the fastest developing regions in the country. Development pressure has been advancing northward from this area as witnessed by the extreme growth in Delaware County over the past decade. This project presents an opportunity to preserve one of the largest remaining forested areas within Morrow County while land values remain relatively low. This property was purchased by a developer on this speculation. The Trust for Public Land was able to negotiate with the developer for this opportunity to purchase the property and has a one-time opportunity to purchase it before development plans are pursued.

PART I SCORE 41 + PART II SCORE 30 = 71

Project Name: Flying Squirrel Preserve Round 14

NRAC SCORING METHODOLOGY – Part III – (24.5 Points Maximum)

1. **Community Planning:** Project is in concert with a documented, publicly adopted regional; community; watershed-wide; or stream corridor-wide plan. (MUST BE CONFIRMED, IN WRITING, BY A PUBLIC OFFICIAL) ***(Check one.)***

* Project meets the goals of ODNR's Kokosing Scenic River Watershed Plan (2004)

		Points:
Project identified as important in the plan	(up to 1.5 points)	
Area identified as important in the plan	(up to 1 point)	
Project would be consistent with the plan	(up to 0.5 points)	**0.5 pts**

2. **Regional Significance:** What is the regional significance of the project? ***(Check only one***):

*The property abuts the boundary of both Chester and Franklin Townships

Project will benefit a multi county area	(2 points)	
Project benefits multiple jurisdictions within 1 county	(1 point)	**1.5 pts**

3. **Natural Resources Viability**: How important is the project to the viability of the natural resources affected by the project? ***(Check all that apply)***

Protects state listed threatened or endangered species (OCCURRENCE MUST BE CONFIRMED, IN WRITING, BY ODNR NATURAL HERITAGE DATA BASE, OHIO EPA, OR OHIO DIVISION OF WILDLIFE)	(up to 5 points)	
Protects a threatened biological community or important example of Ohio's natural areas. (MUST BE DOCUMENTED)	(up to 4 points)	
Preserves native habitat.	(up to 2 points)	**2 pts**
Restores native habitat.	(up to 1 point)	

4. **Readiness to proceed factors: (MUST BE DOCUMENTED BY A LETTER OR A PURCHASE CONTRACT FROM THE SELLER) (Maximum 4 points)**

*****Signed agreement is attached in Appendix F

Signed purchase agreement/contract	(2 points)	**2 pts**
Evidence that closing will take place within 6 months	(2 points)	**2 pts**

*The Trust for Public Land is completing due diligence and ready to acquire for MCPD if funded

Please provide an update on the status of open Clean Ohio approved projects in NRAC 17.

The reviewer may deduct up to 10 discretionary points based on the status of outstanding projects.

Does the applicant have any outstanding projects that have been approved by this NRAC 17? Please provide a one paragraph explanation and update on the status.

5. **Other Project Factors:**

Project addresses a situation where action must be taken now or the opportunity will be lost forever. (MUST DESCRIBE WHY AND DOCUMENT ACCORDINGLY)

(up to 5 points) **5 pts**

*The Trust for Public Land has a one-time opportunity to purchase the property for Conservation before development plans are pursued by the developer who has purchased the Property from the former camp owners.

Project is specific to land acquisition only.

(up to 5 points) **5 pts**

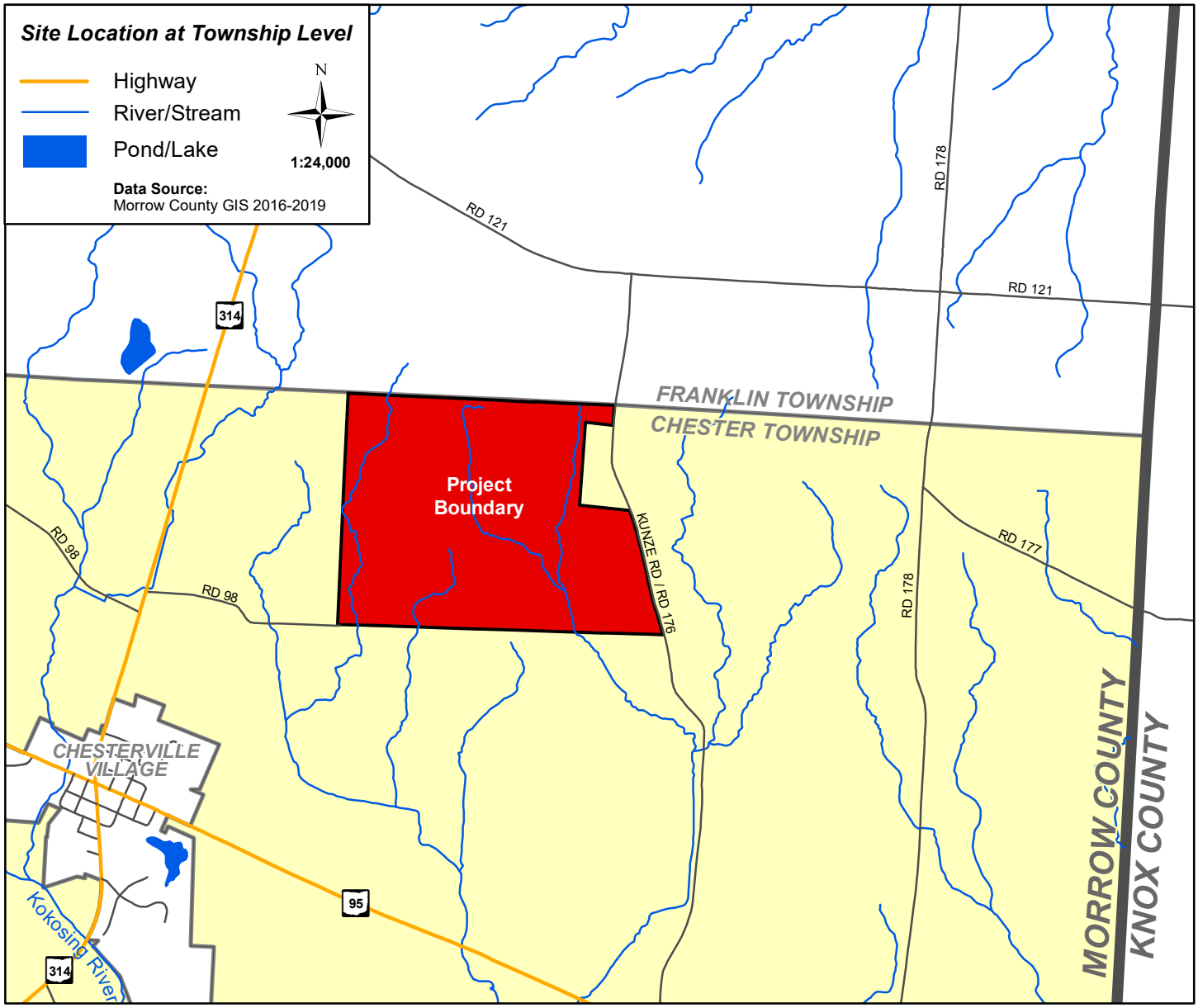
PART III SCORE 18 + PARTS I & II SCORE 71 = 89

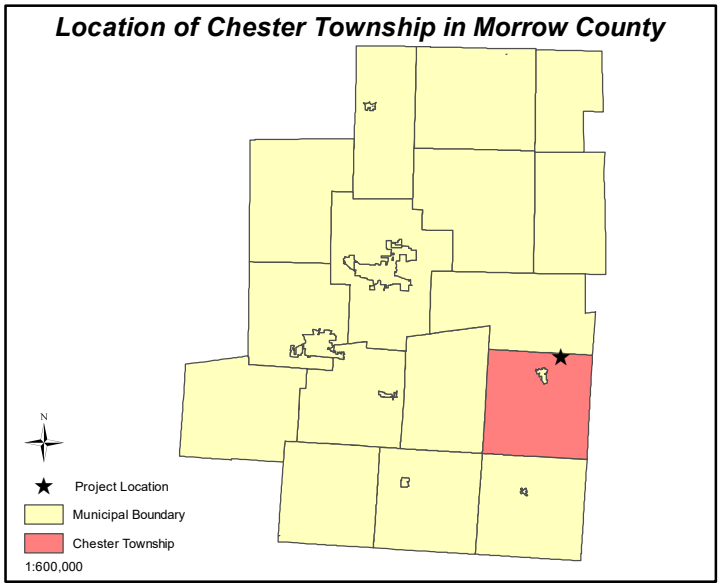
TOTAL SCORE

(110.5 POINTS MAXIMUM)

APPENDIX A

Exhibit 1 Site Location Map
Exhibit 2 Nearby (Site Proximity to) Preserved Areas
Exhibit 3 USGS Topographic Map
Exhibit 4 Soil Survey Map
Exhibit 5 NWI Map
Exhibit 6 FEMA Floodplain Map
Exhibit 7 Existing Site Conditions Map
Exhibit 8 Site Photograph Location Map
Exhibit 9 Site Location within Watershed
Exhibit 10 Survey Plat with Aerial Photograph





CVE No: 18440
DATE: 9/25/2019
MAP BY: ALH

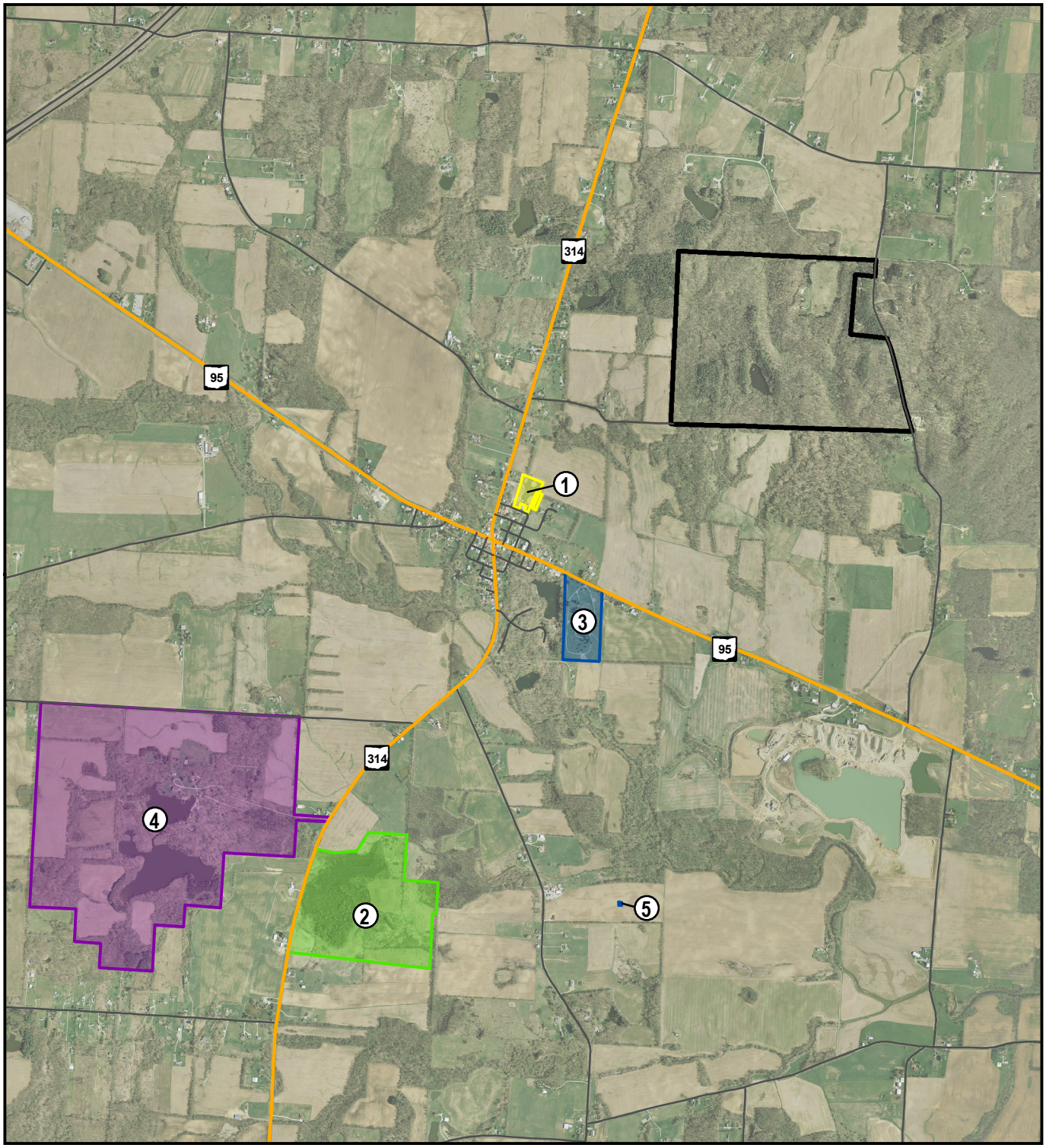
PROJECT: FLYING SQUIRREL PRESERVE

Site Location Map

LOCATION: Chester Township, Morrow County, Ohio

Exhibit 1

CleanOhioFund



Preserved Areas Near Site

1. Chester-Franklin Board of Education
2. Gleason Family Nature Reserve, Morrow County Park District
3. Maple Grove Cemetery
4. Peniel Bible Camp
5. Stilley Cemetery

Legend

- Site Boundary
- Cemetery
- Outdoor Recreation Area
- Park
- School

N

1:30,000

Data Source:
Morrow County GIS 2016-2019

CVE No: 18440
DATE: 9/25/2019
MAP BY: ALH

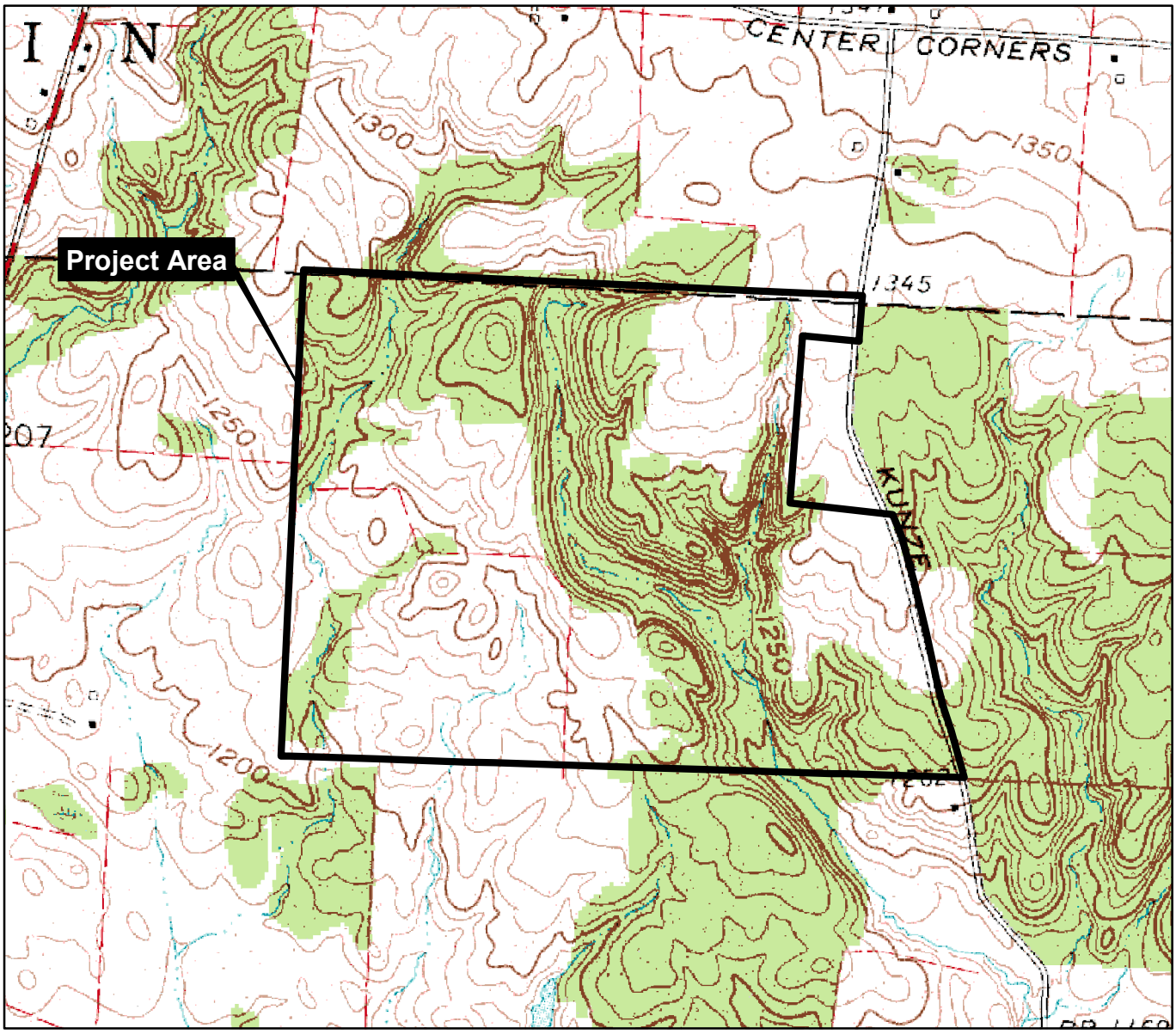
PROJECT: FLYING SQUIRREL PRESERVE

Nearby Green Space Map

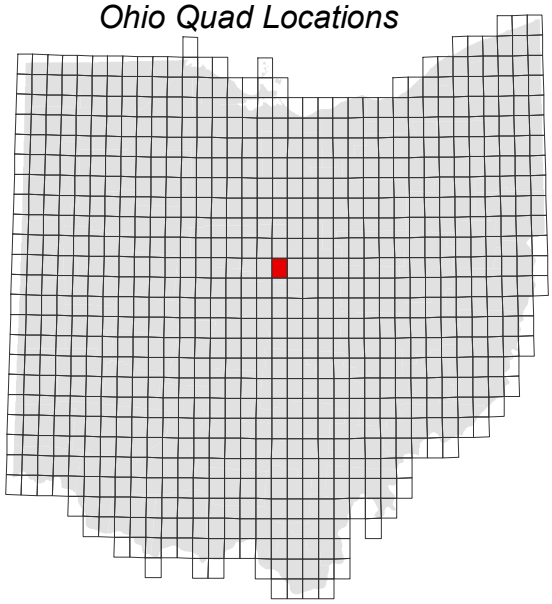
LOCATION: Chester Township, Morrow County, Ohio

Exhibit 2

CleanOhioFund



Ohio Quad Locations



Chesterville 1:24,000 Quadrangle

Morrow County - Ohio

7.5 Minute Series

N

1:12,000

CVE No: 18440
DATE: 9/25/2019
MAP BY: ALH

PROJECT: FLYING SQUIRREL PRESERVE

USGS Topographic Map

LOCATION: Chester Township, Morrow County, Ohio

Exhibit 3

CleanOhioFund

Soil Types Identified on Site

AdB	- Amanda silt loam, 2-6% slopes
AdC2	- Amanda silt loam, 6-12% slopes, eroded
AdE2	- Amanda silt loam, 18-25% slopes, eroded
Cen1B1	- Centerburg silt loam, 2-6% slopes
Cen1C2	- Centerburg silt loam, 6-12%, eroded
ChC	- Chili loam, 6-12% slopes
RsB	- Rittman silt loam, 2-6 % slopes
RsC2	- Rittman silt loam, 6-12% slopes, eroded
Sh	- Shoals silt loam, 0-2% slopes, occasionally flooded
W	- Water
WsD2	- Wooster silt loam, 12-18% slopes, eroded
WsE2	- Wooster silt loam, 18-25% slopes, eroded

Legend

Site Boundary

Soil Survey

N

1:10,000

Data Source:
USDA NRCS 2019

CVE No: 18440
DATE: 9/25/2019
MAP BY: ALH

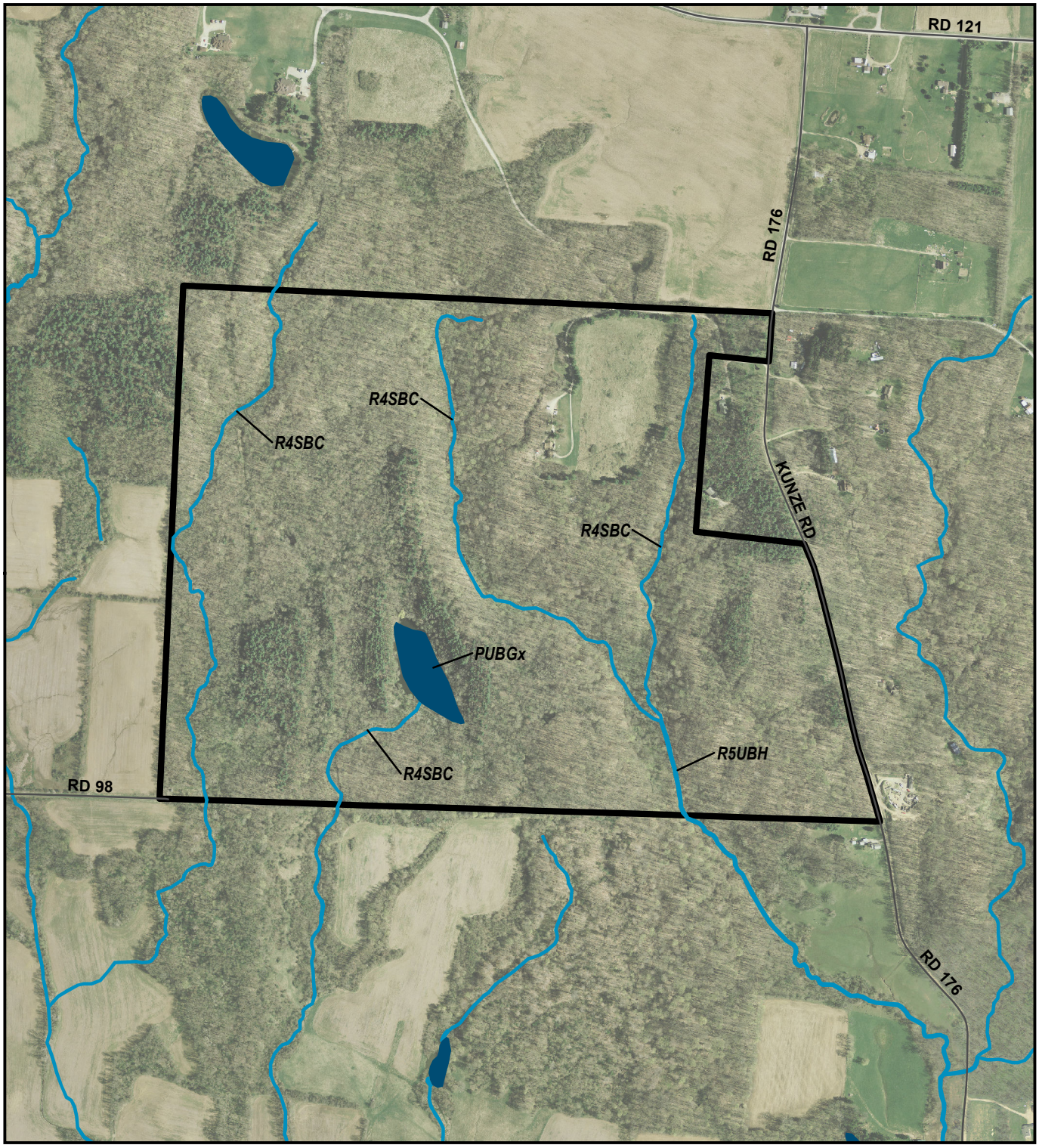
PROJECT: FLYING SQUIRREL PRESERVE

Soil Survey Map

LOCATION: Chester Township, Morrow County, Ohio

Exhibit 4

CleanOhioFund



N.W.I. Classification Codes on Property

Riverine: R4SBC, R5UBH

Freshwater Pond: PUBGx

For full classification code descriptions and detailed information regarding the National Wetlands Inventory, visit https://www.fws.gov/wetlands/data/wetland-codes.html

Legend

- Site Boundary
- Riverine
- Freshwater Pond

N

1:10,000

Data Source:
U.S. Fish and Wildlife Service 2019

CVE No: 18440
DATE: 9/25/2019
MAP BY: ALH

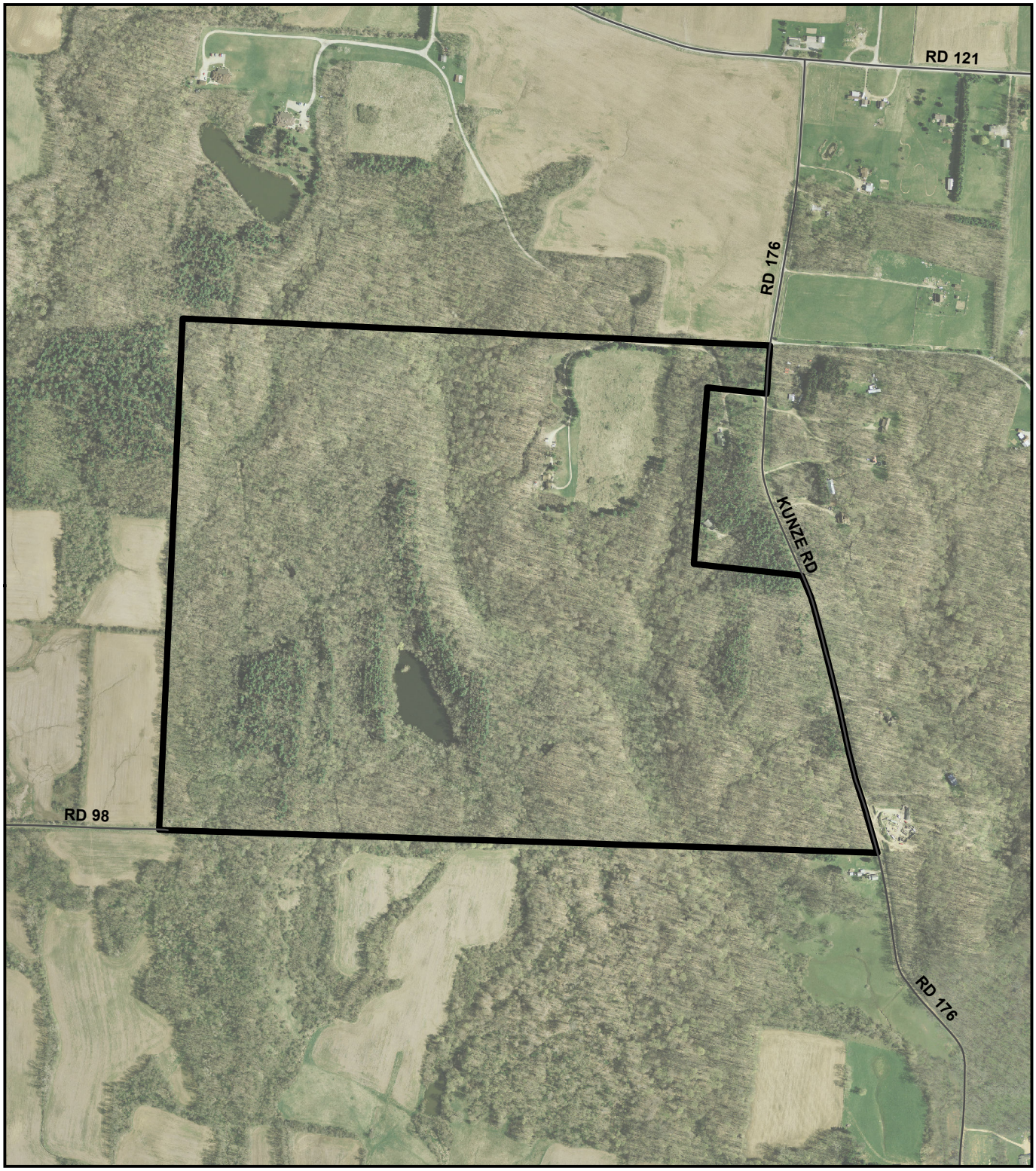
PROJECT: FLYING SQUIRREL PRESERVE

National Wetlands Inventory Map

LOCATION: Chester Township, Morrow County, Ohio

Exhibit 5

CleanOhioFund



The National Flood Hazard Layer indicates the entirety of the site exists in Flood Zone X - Area of Minimal Flood Hazard.

Legend

Site Boundary

N

1:10,000

Data Source:
FEMA Flood Insurance Rate Map 2009

CVE No: 18440
DATE: 9/25/2019
MAP BY: ALH

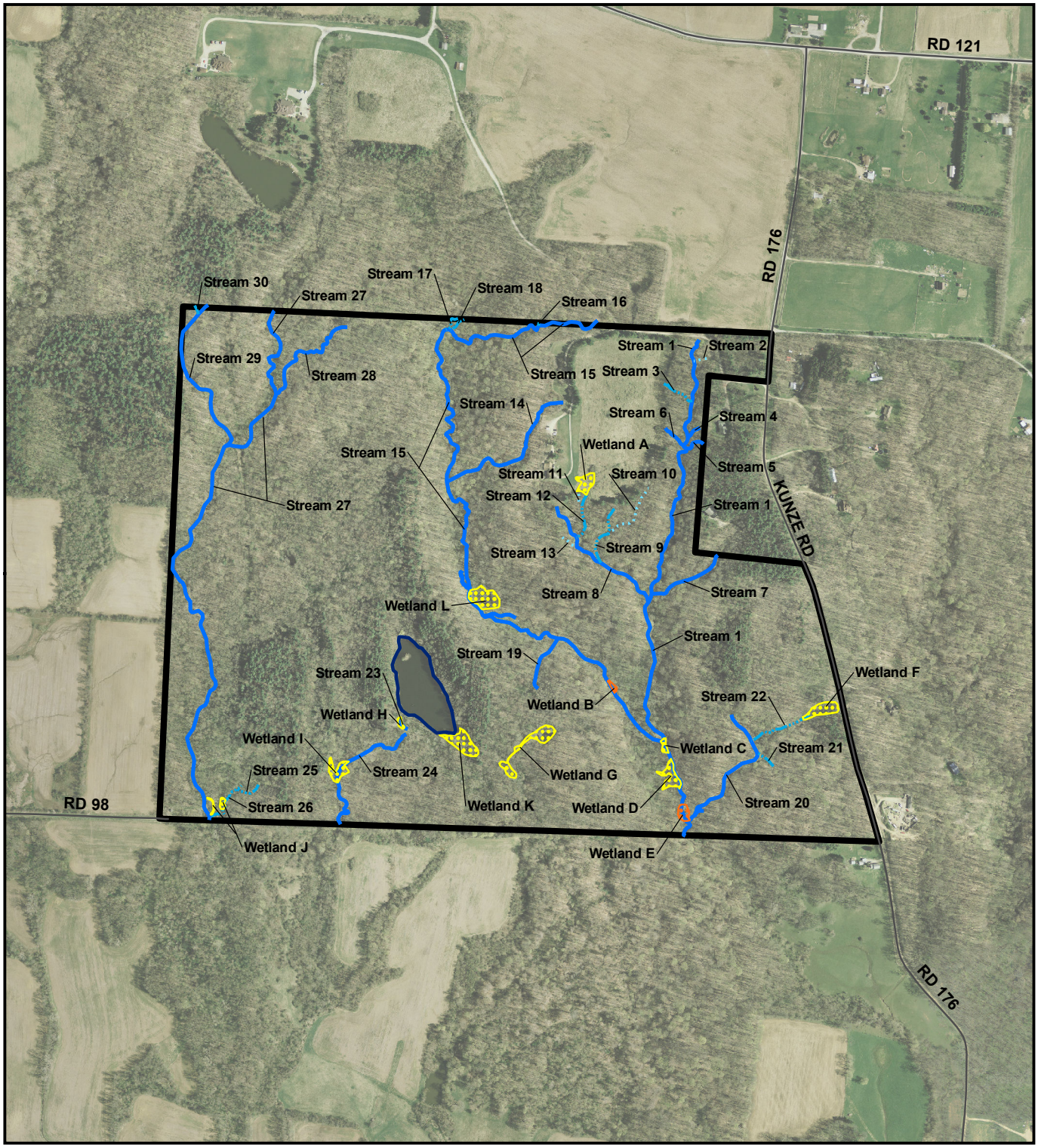
PROJECT: FLYING SQUIRREL PRESERVE

FEMA Flood Hazard Map

LOCATION: Chester Township, Morrow County, Ohio

Exhibit 6

CleanOhioFund



Legend

- Ephemeral Stream (673 ft)
- Intermittent Stream (2,102 ft)
- Perennial Stream (18,174 ft)
- Pond
- Category 3 Wetland (0.14 acres)
- Wetland (2.00 acres)
- Site Boundary

Stream Total: 20,949 feet

Wetland Total: 2.14 acres

N

1:10,000

Data Source:
Chagrin Valley Engineering 2019

CVE No: 18440
DATE: 9/25/2019
MAP BY: ALH

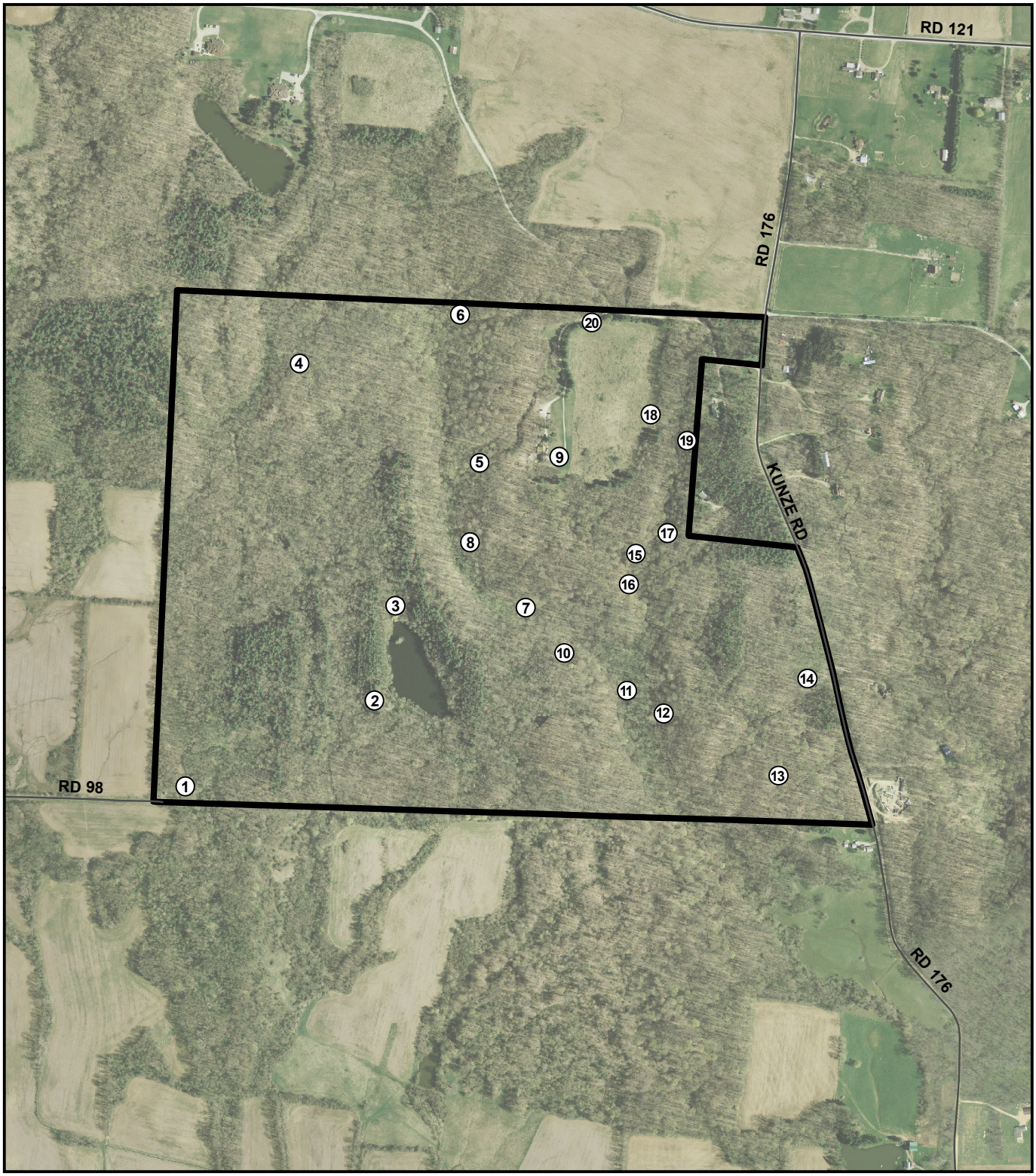
PROJECT: FLYING SQUIRREL PRESERVE

Existing Conditions Map

LOCATION: Chester Township, Morrow County, Ohio

Exhibit 7

CleanOhioFund



Legend

Site Boundary

① Photo Location

N

1:10,000

Data Source:
Chagrin Valley Engineering 2019

CVE No: 18440
DATE: 9/25/2019
MAP BY: ALH

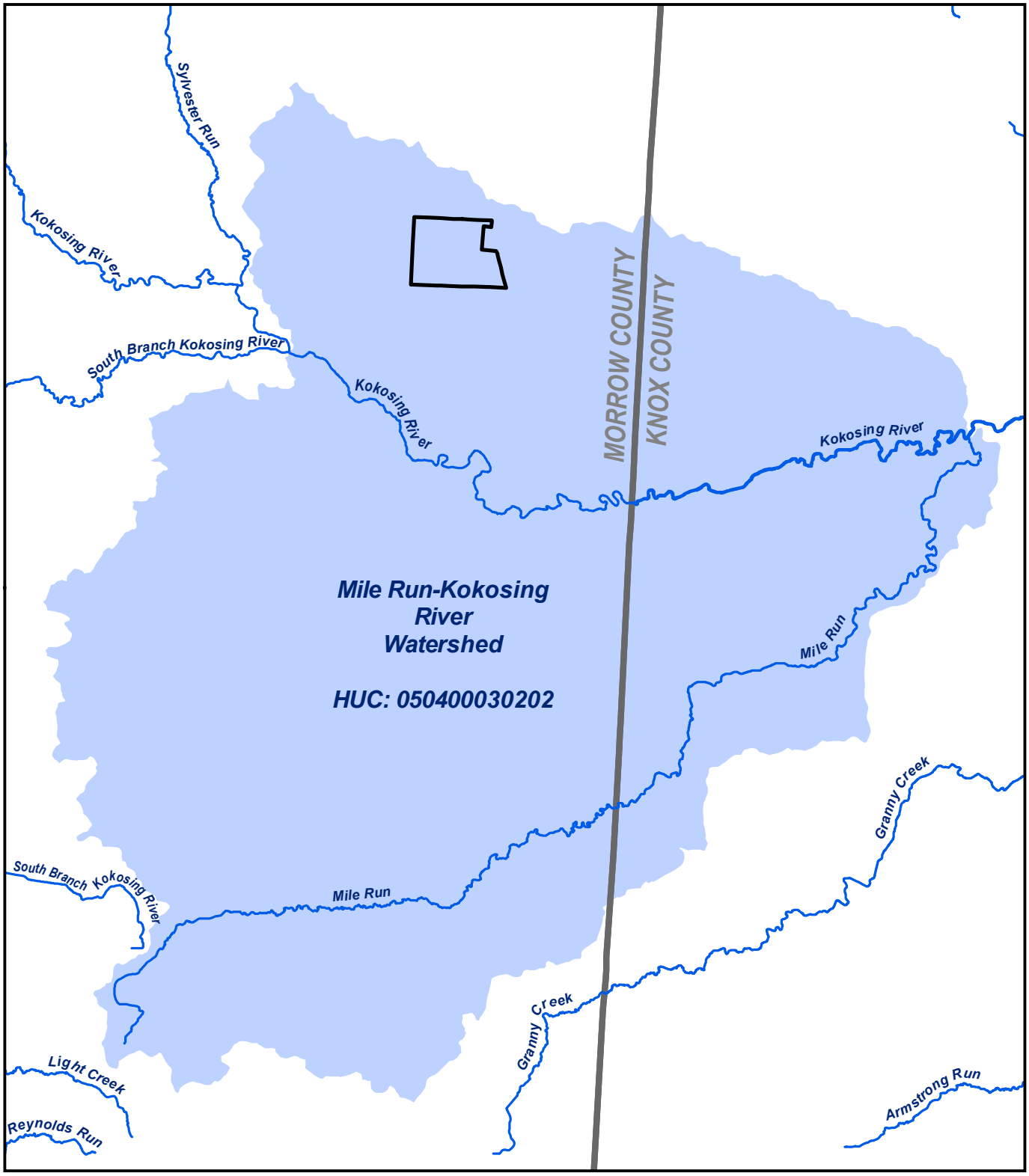
PROJECT: FLYING SQUIRREL PRESERVE

Photo Locations Map

LOCATION: Chester Township, Morrow County, Ohio

Exhibit 8

CleanOhioFund



Legend

- River/Stream
- County Boundary
- Site Boundary
- Mile Run-Kokosing River Watershed

N

1:75,000

Data Source:
USGS Watershed Boundary Dataset 2013

CVE No: 18440
DATE: 9/25/2019
MAP BY: ALH

PROJECT: FLYING SQUIRREL PRESERVE

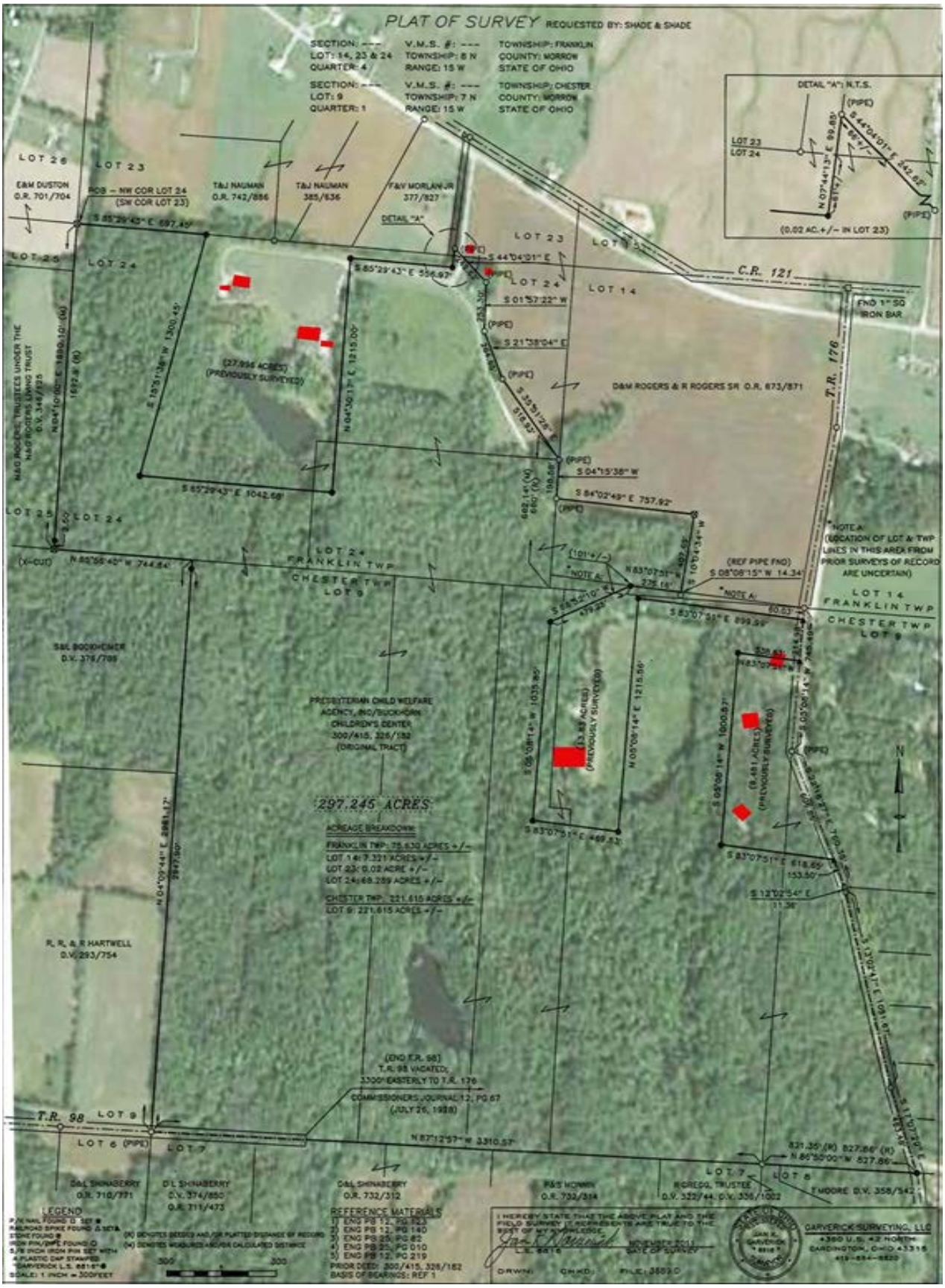
Location in Watershed Map

LOCATION: Chester Township, Morrow County, Ohio

Exhibit 9

CleanOhioFund

Flying Squirrel Preserve Survey Plat Map



APPENDIX B

Existing Conditions Photograph Log

Date: November 6, 2018

Photo ID: 1

Feature: Stream 27

Comments: View looking downstream on Stream 27 at existing old bridge crossing. Stream 27 is a perennial stream in which fish were observed.

Date: November 6, 2018

Photo ID: 2

Feature: Wetland H

Comments: Both Wetland H and Stream 23 receive flow from the existing dam outlet. Wetland H is dominated by emergent and woody vegetation.

Date: November 6, 2018
Photo ID: 3
Feature: Open Water
Comments: Pond 1 provides open water habitat for fish and amphibians.

Date: November 6, 2018
Photo ID: 4
Feature: Upland Woods
Comments: Second growth woods on slope above Stream 28.

Date: November 5, 2018

Photo ID: 5

Feature: Stream 14

Comments: View of spring-fed perennial Stream 14 that flows into Stream 15. Note steep forested banks and well developed, sinuous channel morphology.

Date: November 5, 2018

Photo ID: 6

Feature: Streams 17/18

Comments: View looking down on intermittent Streams 17 and 18. Note mature forested riparian buffer zones surrounding the channels.

Date: November 5, 2018

Photo ID: 7

Feature: Stream 15

Comments: View of perennial Stream 15. Note overhanging vegetation and root wads. Stream 15 is well developed with a large floodplain and dense forested riparian buffers.

Date: November 5, 2018

Photo ID: 8

Feature: Amphibian

Comments: *Rana pipens* (Northern Leopard Frog) observed within Stream 15.

Date: November 6, 2018
Photo ID: 9
Feature: Wetland A
Comments: Wetland A is an emergent, scrub shrub wetland with blackened leaves hydrology. View looking east within existing utility easement.

Date: November 5, 2018
Photo ID: 10
Feature: Upland Woods
Comments: Large trees observed on the Flying Squirrel Preserve include *Carya ovata* (Shagbark Hickory), which provide potential Indiana bat and Northern Long-eared bat roosting and nesting habitat.

Date: November 5, 2018
Photo ID: 11
Feature: Stream 15
Comments: Stream 15, view looking upstream from bank. Stream 15 is a perennial flowing channel.

Date: November 5, 2018
Photo ID: 12
Feature: Wetland C
Comments: Wetland C is an emergent and forested wetland with areas of permanent inundation which offer amphibian breeding habitat. View looking north.

Date: November 5, 2018
Photo ID: 13
Feature: Upland Woods
Comments: View midslope in upland woods southweast of Stream 20.

Date: November 5, 2018
Photo ID: 14
Feature: Wetland F
Comments: View looking west within Wetland F. Wetland is a forested, shrub and emergent wetland with standing water hydrology.

Date: November 5, 2018
Photo ID: 15
Feature: Upland Woods
Comments: View looking south along ridgeline between Stream 8 and Stream 1.

Date: November 5, 2018
Photo ID: 16
Feature: Stream 8
Comments: View looking downstream Stream 8 (perennial) near confluence with Stream 1.

Date: November 5, 2018
Photo ID: 17
Feature: Stream 1
Comments: Stream 1 looking downstream from channel (perennial).

Date: November 5, 2018
Photo ID: 18
Feature: Stream 6
Comments: Stream 6 (intermittent) looking upstream, above confluence with Stream 1.

Date: November 5, 2018
Photo ID: 19
Feature: Upland Woods
Comments: Plant community along sloping right bank of Stream 5, view looking NW.

Date: November 5, 2018
Photo ID: 20
Feature: Upland
Comments: View looking south from existing access driveway at field.

APPENDIX C

Resolutions and Letters of Support

MORROW COUNTY COMMISSIONERS

80 North Walnut Street, Suite A
Mount Gilead, Ohio 43338

Commissioners:
Thomas E. Whiston
Burgess W. Castle
Warren E. Davis

Phone: (419) 947-4085
Fax: (419) 947-1860
www.morrowcountyohio.gov

The following action was taken by the Board of Morrow County Commissioners during regular session on September 9, 2019:

IN THE MATTER OF
RESOLUTION OF SUPPORT FOR A CLEAN OHIO CONSERVATION FUND APPLICATION BY MORROW COUNTY PARK DISTRICT AND THE TRUST FOR PUBLIC LAND TO ACQUIRE APPROXIMATELY –/- 338.52 ACRES KNOWN AS THE BUCKHORN CAMP PROPERTY LOCATED AT 7130 COUNTY ROAD 121, FREDERICKTOWN, MORROW COUNTY, OHIO: 19-R-734

Mr. Whiston made a motion to approve the following resolution:

RESOLUTION

WHEREAS, the State of Ohio, through the Ohio Public Works Commission, administers financial assistance for the preservation of open spaces, sensitive ecological areas and stream corridors, through The Clean Ohio Fund Green Space Conservation Program, and;

WHEREAS, the Morrow County Park District and The Trust for Public Land desires financial assistance under The Clean Ohio Fund Green Space Conservation Program for the purchase of the Buckhorn Camp Property located in Chester and Franklin townships, Morrow County, Ohio;

NOW, THEREFORE, BE IT RESOLVED by the Commissioners of Morrow County, Ohio; that the Commissioners hereby support the filing of an application by Morrow County Park District, in partnership with The Trust for Public Land, to the Clean Ohio Fund Green Space Conservation Program for financial assistance to acquire the approximately –/- 338.52 acres known as the Buckhorn Camp Property located at 7130 County Road 121, Fredericktown, Morrow County, Ohio, for the purposes of conservation and protection of the water resources, plants, wildlife, wetlands, and important near stream and upland habitats, and for public use, recreation, and enjoyment of the outdoors.

The above resolution stands approved and adopted on this 9th day of September, 2019 and is effective immediately.

Mr. Davis duly seconded this motion.

Roll Call Vote: ..,Mr. Castle..., "yea" ..,Mr. Whiston..., "yea" .., Mr. Davis.., "yea"

BOARD OF MORROW COUNTY COMMISSIONERS

Tom E. Whiston

Burgess W. Castle

Warren E. Davis

MCC/ch

September 15, 2019

Ms. Dixie Shinaberry, Secretary
Morrow County Park District
694 Westview Drive,
Mt Gilead, Ohio 43338

Dear Ms. Shinaberry,

I am writing on behalf of the Morrow County Conservation Club in support of your efforts to obtain funding through the Clean Ohio Grant Program to purchase 338 acres at the former Buckhorn Camp property that is north of Chesterville.

This potential addition to the Morrow County Park District would greatly expand recreational opportunities for Morrow County's residents and will significantly improve efforts to conserve and protect water resources, wildlife, wetlands, and riparian habitats.

Regards,

Morrow County Conservation Club

Dixie Shinaberry

MORROW COUNTY
Love life. Live rural.

MORROW COUNTY PLANNING
80 N. Walnut Place, Suite C
Mount Gilead, OH 43338
419/946-1911

September 17, 2019

RE: Letter of Support for a Clean Ohio Conservation Fund application by Morrow County Park District and The Trust for Public Land to acquire approximately +/- 338.52 acres known as the Buckhorn Camp Property located at 7130 County Road 121, Fredericktown, Morrow County, Ohio.

Whereas, the State of Ohio , through the Ohio Public Works Commission, administers Financial assistance for the preservation of open spaces, sensitive ecological areas and stream corridors, through The Clean Ohio Fund Green Space Conservation Program and;

Whereas, the Morrow County Park District and The Trust for Public Land desires financial assistance under The Clean Ohio Fund Green Space Conservation Program for the purchase of the Buckhorn Camp Property located in Chester, and Franklin Townships, Morrow County, Ohio

Therefore I, Brent Russell Morrow County Planning and Zoning Director support the filing of an application by Morrow County Park District, in partnership with The Trust for Public Land, to the Clean Ohio Fund Green Space Conservation Program for financial assistance to acquire the approximately +/- 338.52 acres known as the Buckhorn Camp property located at 7130 County Road 121, Fredericktown, Morrow County, Ohio, for the purpose of conservation and the protection of the water resources, plants, wildlife, wetlands, and important near stream and upland habitats, and for public use, recreation, and enjoyment of the outdoors.

I therefore, the Zoning and Planning Director determines that this acquisition, although not having been previously and specifically named, would become a very integral component of the Morrow County Comprehensive Land Use Plan.

Respectfully,

Brent Russell

Brent Russell
Morrow County Planning and Zoning Director

Highland Local Schools
Morrow County, Ohio

Resolution No. 19-09-158

Proposed: Mrs. Belcher

RE: Resolution of Support for a Clean Ohio Conservation Fund application by Morrow County Park District and The Trust for Public Land to acquire approximately +/- 338.52 acres previously known as the Buckhorn Camp Property located at 7130 County Road 121, Fredericktown, Morrow County, Ohio

WHEREAS, The State of Ohio, through the Ohio Public Works Commission, administers financial assistance for the preservation of open spaces, sensitive ecological areas and stream corridors, through The Clean Ohio Fund Green Space Conservation Program, and;

WHEREAS, The Morrow County Park District and The Trust for Public Land desires financial assistance under The Clean Ohio Fund Green Space Conservation Program for the purchase of the Buckhorn Camp Property located in Chester and Franklin Townships, Morrow County, Ohio;

NOW, THEREFORE, BE IT RESOLVED by the Superintendent and Board of Education of Highland Local School District Morrow County, Ohio;

Article I. That the Highland School Board hereby supports the filing of an application by Morrow County Park District, in partnership with The Trust for Public Land, to the Clean Ohio Fund Green Space Conservation Program for financial assistance to acquire the approximately +/- 338.52 acres also known as the Buckhorn Camp Property located at 7130 County Road 121, Fredericktown, Morrow County, Ohio, for the purposes of conservation and protection of the water resources, plants, wildlife, wetlands, and important near stream and upland habitats, and for public use, recreation, and enjoyment of the outdoors.

The above resolution stands approved and adopted on this 11th day of September, 2019 and is effective immediately.

Roll:
Yeas: Mrs. Belcher, Mr. Hinkle, Mr. Messmer, Mr. Short, Mr. Thacker

Certification:
Jon Mason, Treasurer _____ 9/12/19

United States Department of the Interior
NATIONAL PARK SERVICE
Rivers, Trails and Conservation Assistance
Ohio Field Office
1664 W. Main Street
Peninsula, OH 44264

August 12, 2019

Mr. Bill Loebick, Board Chairman
Morrow County Park District
7590 New Delaware Road
Mt. Vernon, OH 43050

RE: Clean Ohio Conservation Fund Project - Buckhorn Camp Property

Dear Mr. Loebick,

The National Park Service, Rivers, Trails, and Conservation Assistance – Ohio Field Office, is proud to extend its support to Morrow County Park District and The Trust for Public Land in their request to the Clean Ohio Conservation Fund for the acquisition of the former Buckhorn Camp property. The NPS-RTCA has worked for many years in partnership with local agencies and organizations to expand watershed protection and outdoor recreation opportunities. This project supports important stream conservation and provides many benefits to the community for outdoor passive recreation.

The +/- 338.52-acre former Buckhorn Camp property offers numerous ecological benefits due to its diversity of habitats that includes several thousand linear feet of Mile Run Kokosing River tributary streams, wetlands, and over 300 acres of forested uplands. The conservation of this property contributes substantially to the protection and enhancement of water quality within the Kokosing River watershed, and offers additional recreational benefits including wildlife viewing, nature study, and hiking.

We are proud of the efforts of the Morrow County Park District and The Trust for Public Land as they work to expand natural resource conservation and watershed protection in Morrow County, Ohio. On behalf of the National Park Service, thank you for your efforts in applying to the Clean Ohio Conservation Fund for the conservation of the former Buckhorn Camp property.

Sincerely,

Andrea Irland
Outdoor Recreation Planner
National Park Service –Rivers, Trails, Conservation & Assistance

THE TRUST FOR PUBLIC LAND

1250 Old River Rd..
Suite 202
Cleveland, OH
44113
T: 216.928.7518
F: 216.928.7519
tpl.org

August12, 2019

Mr. Bill Loebick, Board Chairman
Morrow County Park District
7590 New Delaware Road
Mt. Vernon, OH 43050

RE: Clean Ohio Conservation Fund Project - Buckhorn Camp Property

Dear Mr. Loebick:

The Ohio Office of The Trust for Public Land (TPL), a national non-profit conservation organization, has partnered with Morrow County Park District to assist with the conservation efforts on the former Buckhorn Camp property. Specifically, TPL is assisting in facilitating the purchase of this very unique property due to its high conservation and recreational values. This project is central to the core principles and mission of TPL, and we are delighted to be a partner working with Morrow County Park District to see it through to success. TPL is providing $20,000 in financial support to the project by covering land acquisition due diligence and application preparation related expenses.

Protection of this property will greatly expand conservation, recreation, and environmental education opportunities in Morrow County. The former Buckhorn Camp property contains a diversity of habitats including forests, meadows, wetlands, and several thousand feet of primary headwater habitat streams within the Mile Run Kokosing River watershed. Other recreational benefits include wildlife viewing, nature study, and hiking.

We are proud of the efforts of the Morrow County Park District as they work to expand natural resource conservation and public accessibility to the outdoors. Thank you for your efforts on the Clean Ohio Conservation Fund grant request and please feel free to contact me anytime to discuss TPL's conservation services on this or any other opportunity.

Sincerely,

Shanelle Smith
Ohio State Director

August12, 2019

Mr. Bill Loebick, Board Chairman
Morrow County Park District
7590 New Delaware Road
Mt. Vernon, OH 43050

RE: Clean Ohio Conservation Fund Project - Buckhorn Camp Property

Dear Mr. Loebick,

The Morrow Soil & Water Conservation District extends its support to Morrow County Park District and The Trust for Public Land in their request to the Clean Ohio Conservation Fund for the acquisition of the former Buckhorn Camp property. The District has worked for many years in partnership with individuals, municipalities, and local organizations to expand watershed protection. This project supports important wetland and stream conservation, and provides many benefits to the community for outdoor passive recreation.

The +/- 338.52-acre former Buckhorn Camp property offers numerous ecological benefits due to its diversity of habitats that include forested uplands, wetlands, and thousands of linear feet of primary headwater habitat streams in the Mile Run watershed that are important tributaries of the Kokosing River.

We are proud of the efforts of Morrow County Park District and The Trust for Public Land as they work to expand natural resource conservation and watershed protection in Morrow County. On behalf of the Morrow Soil & Water Conservation District, thank you for your efforts in applying to the Clean Ohio Conservation Fund for the conservation of the former Buckhorn Camp property.

Sincerely,

Matt Stooksbury
District Administrator
Morrow Soil & Water Conservation District

APPENDIX D

Ecological Survey Report

ECOLOGICAL ASSESSMENT REPORT

Flying Squirrel Preserve

Chester Township,

Morrow County, Ohio

Prepared For:

Morrow County Park District

NOVENBER 2018

CVE PROJECT NO. 18440

CVE CHAGRIN VALLEY ENGINEERING, LTD.

Creative Engineers. Intelligent Solutions.

22999 Forbes Road, Suite B • Cleveland, Ohio 44146-5667

Phone: 440.439.1999 • Fax: 440.439.1969 • www.cvelimited.com

METHODS

In November 2018, Chagrin Valley Engineering (CVE) biologists and wetland scientists completed an Ecological Assessment (EA) of 234-acres of land located at 7130 County Road 121 in Chester Township, Morrow County, Ohio. The EA is a general evaluation of the flora and fauna as well as the terrestrial and aquatic habitats present on the property. On this property, known as **Flying Squirrel Preserve**, we identified expansive forested uplands, high-quality wetlands and 20,949 linear feet of stream channels. These streams are natural channels with forested buffers, and exhibit flow regimes from ephemeral to perennial (see Exhibit 1 on Page 6).

GENERAL VEGETATION COMMUNITY DYNAMICS

Most of the property is forested, consisting of a mixture of young forest, second growth forest, older stratified forest with minor areas of wooded wetlands. Seeps were common and located near intermittent streams and bottomland areas.

Drier ridges, overlooking the ravines and stream valleys, had *Carya glabra* (pignut hickory) and *Carya ovata* (shagbark hickory), *Acer rubrum* (red maple), *Acer saccharum* (sugar maple*),* *TulipLiriodendron* (tulip), *Prunus serotina* (black cherry), *Quercus rubra* (red oak) and *Quercus alba* (white oak). Within the bottomland forests, large diameter oak and sycamore trees can be found.

The tops of the Wisconsinan ridge moraine deposits had pockets of drier forests that had beech, maples, red oaks and white oaks. Ferns such as *Dryopteris marginalis* (wood fern), were common in these areas and are an indicator of a stable forest.

STREAM HABITAT EVALUATIONS

Stream habitat quality was evaluated using the appropriate Ohio EPA methodology based on watershed size and stream characteristics. The methodology selected to evaluate the 30 streams present on the property was the Primary Headwater Habitat Evaluation Index (HHEI).

The typical substrate types within the stream channels were a mix of highly stable boulder, cobble and gravel substrates. Common instream habitats included undercut banks, logs and other woody debris as well as overhanging vegetation.

The headwater streams on this property protect the long-term ecological integrity and ecosystem value of this site as well as the water quality of downstream areas. The completed HHEI scoring forms for the streams on-site are attached to this report.

WETLAND QUALITY EVALUATION

The wetlands are forested with sections of wet shrub and an understory of diverse emergent wetland vegetation. Approximately 9-acres of forested wetlands are present. Dense stands of *Carex* species (sedges), wet grasses and other herbaceous plants such as *Impatiens capensis (jewelweed) and Onoclea sensibilis (sensitive fern)* dominate the herbaceous layer of the wetlands. Tree species consist of *Acer rubrum* (red maple) and *Quercus* spp (oaks).

Wetland hydrology is present as evidenced by blackened leaves and wetland drainage patterns. Soils are saturated and exhibit hydric (wetland) soil characteristics including a depleted matrix.

The Ohio Rapid Assessment Method (ORAM) scores identified Category 2 and Category 3 (rare, highest quality) wetlands on-site (see Attachments). The dominant ecotones on this parcel are rich upland forest and forested wetlands. In addition, there are smaller sections of riverine and an upland meadow surrounding the camp structures (see Exhibit 1 on Page 6).

FAUNA

There is evidence of deer (droppings, browsing evidence and hoof prints) and the scat of other small mammals. The streams serve as habitat for invertebrates, amphibians and headwater fish species. Preservation of these streams and surrounding areas will significantly improve water quality by acting as a filter and buffer from the surrounding development and will improve the ecological sustainability by providing a habitat for native flora and fauna (see Species List in the Attachments).

HABITATS

The parcels contain critical habitat for a variety of native plant and animal species. There are several quality vegetative communities including mixed emergent riverine and mixed mesophytic forest.

Mixed Emergent - Riverine Community

This community type includes immersed plants as well as herbaceous plants on adjacent wet mud, sand and gravel bars. Emergent riverine communities are found along the main channels of streams (Wetlands B, D, E, I and L) and the large pond in the south-central portion of the property (see Exhibit 1 on Page 6 for their locations). The composition of these communities was predominantly flowering and wet grass species such as *Boehmeria cylindrica* (bog hemp), *Impatiens capensis* (jewelweed),

Juncus effusus (soft rush), *Leersia oryzoides* (rice cutgrass) and *Persicaria hydropiperoides* (swamp smartweed).

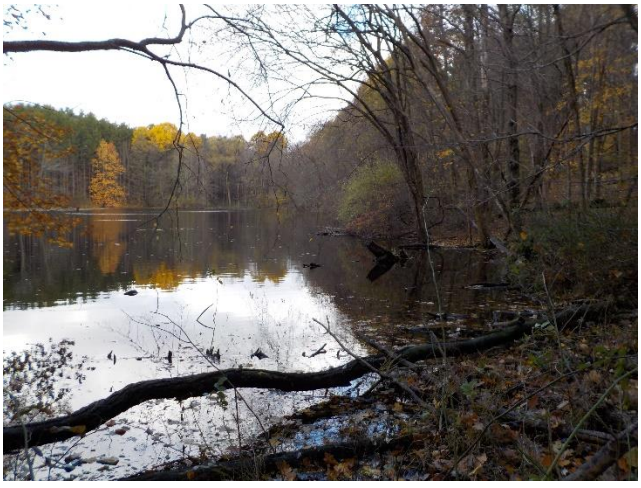
Mixed Mesophytic Forest Community

Mixed mesophytic forests are common on this site and are dominated by combinations of beech, tulip, maples and oak with associated species of hickories, black walnut (*Juglans nigra*) and cucumber (*Magnolia acuminata*). These forests provide a protective buffer for the streams and offer habitat for a variety of terrestrial species.

ECOLOGICAL VALUES

Abundant Indiana bat (*Myotis sodalis*) and Northern long-eared bat (*Myotis septentrionalis)* habitat trees are present on the site. These species of bats are typically found in a variety of woodland habitats. Proper summer habitat characteristics include cavities, exfoliating or peeling bark, and split limbs. These characteristics can be found on live or dead trees. Bats are most frequently observed along the riparian corridors of small and medium sized streams such as those found on this site.

The protection of this property will help preserve water quality by letting the land remain in a natural, undeveloped state. This will allow rainwater to continue to infiltrate into the ground and reduce the amount of stormwater runoff. Headwater streams moderate the flow of water into larger streams and reduce the frequency of flooding in downstream areas. In addition, headwater streams assimilate pollutants and provide important habitat for numerous aquatic communities.



Threatened, Rare, or Endangered Species

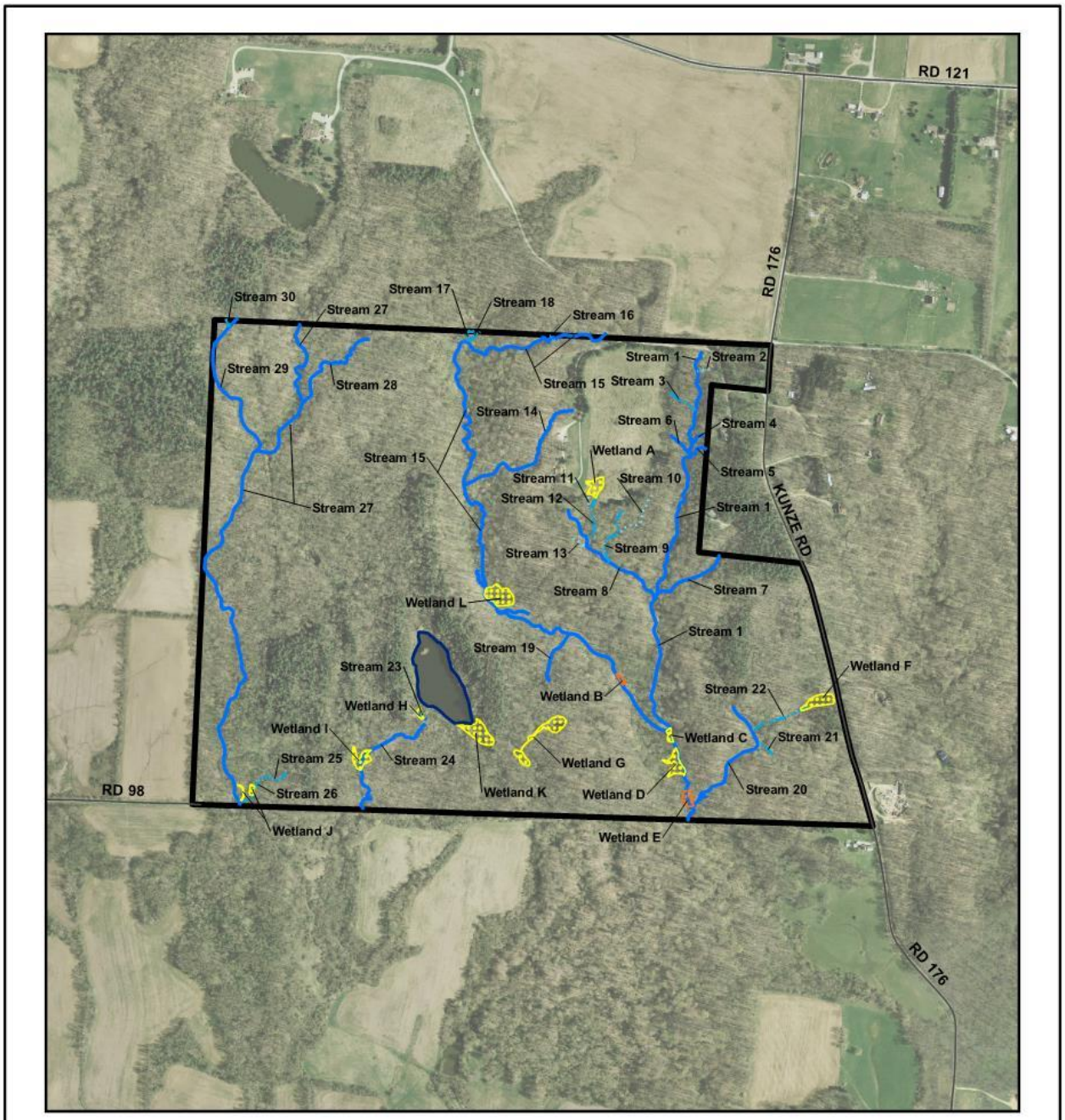
There are no known federally endangered species, either plant or animal, in the Kokosing River watershed. The watershed does support five state endangered and five state threatened species. Protecting wetlands and riparian areas such as those that are present on this site not only provides for water quality, and fish and wildlife habitat, but also protects the history of this watershed.

An additional stormwater benefit of protecting this property is the preservation of the associated floodplains as well as adjacent wetlands. Wetlands provide functions such as recharging and protecting groundwater, reducing runoff volume and velocity, and minimizing sediment pollution. Permanent protection of this large, intact natural green space will ensure that the on-site streams continue to have access to natural floodplains, which will benefit the quality of all downstream waters.

REPORT PREPARED BY:

Lawrence N. Ludwig, PWS
PROFESSIONAL WETLAND SCIENTIST (#000239)

Erin VanNort
WETLANDS BIOLOGIST



CVE No: 18440
DATE: 9/25/2019
MAP BY: ALH

PROJECT: FLYING SQUIRREL PRESERVE

Existing Conditions Map

LOCATION: Chester Township, Morrow County, Ohio

Exhibit 1

CleanOhioFund

OBSERVED SPECIES LIST

CHAGRIN VALLEY ENGINEERING, LTD.
Creative Engineers. Intelligent Solutions.

Compilation of Species Observed at Flying Squirrel Preserve

	Common Name	Scientific Name	Status
Amphibians	Eastern American Toad	*Bufo americanus americanus*	
	Green Frog	*Lithobates clamitans*	
	Northern Leopard Frog	*Rana pipens*	
Fish	Johnny Darter	*Etheostoma nigrum*	
	Bluntnose Minnow	*Pimephales notatus*	
	Creek Chub	*Semotilus atromaculatus*	
Insects	Marbled Orb Weaver	*Araneus marmoreus*	
	Ebony Jewelwing	*Calopteryx maculata*	
	Eastern Pondhawk	*Erythemis simplicicollis*	
	Blue Dasher	*Pachydiplax longipennis*	
Birds	Red-winged Blackbird	*Agelaius phoeniceus*	
	Red-tailed Hawk	*Buteo jamaicensis*	
	Northern Cardinal	*Cardinalis cardinalis*	
	Turkey Vulture	*Cathartes aura*	
	Crow	*Corvus brachyrhynchos*	
	Blue Jay	*Cyanocitta cristata*	
	Pileated Woodpecker	*Dryocopus pileatus*	
	Gray Catbird	*Dumetella carolinensis*	
	Wild Turkey	*Meleagris gallopavo*	
	House Sparrow	*Passer domesticus*	
	Downy Woodpecker	*Picoides pubescens*	
	Black-Capped Chickadee	*Poecile atricapilla*	
	American Robin	*Turdus migratorius*	
	Mourning Dove	*Zenaida macroura*	
Mammals	Groundhog	*Marmota monax*	
	White-tailed Deer	*Odocoileus virginianus*	
	Raccoon	*Procyon lotor*	
	Squirrel	*Sciurus niger*	
	Chipmunk	*Tamias striatus*	
	Southern Flying Squirrel	*Glaucomys volans*	
Woody Plants	Ash-leaf Maple	*Acer negundo*	
	Red Maple	*Acer rubrum*	
	Sugar Maple	*Acer saccharum*	
	European Black Alder	*Alnus glutinosa*	
	American Hornbeam	*Carpinus carliniana*	
	Pignut Hickory	*Carya glabra*	
	Shagbark Hickory	*Carya ovata*	
	Silky Dogwood	*Cornus amomum*	
	Grey Dogwood	*Cornus racemosa*	
	Washington Hawthorn	*Crataegus phaenopyrum*	
	Russian Olive	*Elaeagnus angustifolia*	

Chester Twp.
Morrow County

Compilation of Species Observed at Flying Squirrel Preserve

	Common Name	Scientific Name	Status
	American Beech	*Fagus grandifolia*	
	Green Ash	*Fraxinus pennsylvanica*	
	Glossy Buckthorn	*Frangula alnus*	
	American Witchhazel	*Hamamelis virginiana*	
	Black Walnut	*Juglans nigra*	
	American Sweetgum	*Liquidambar styraciflua*	
	Tulip	*Liriodendron tulipifera*	
	Cucumbur Magnolia	*Magnolia acuminata*	
	Ironwood	*Ostrya virginiana*	
	Norway Spruce	*Picea abies*	
	Eastern White Pine	*Pinus strobus*	
	American Sycamore	*Platanus occidentalis*	
	Eastern Cottonwood	*Populus deltoides*	
	Aspen	*Populus tremuloides*	
	Pin Cherry	*Prunus pensylvanica*	
	Black Cherry	*Prunus serotina*	
	White Oak	*Quercus alba*	
	Scarlet Oak	*Quercus coccinea*	
	Red Oak	*Quercus rubra*	
	Pin Oak	*Quercus palustris*	
	Multiflora Rose	*Rosa multiflora*	
	Blackberry	*Rubus allegheniensis*	
	Black Willow	*Salix nigra*	
	Sassafras	*Sassafras albidum*	
	Basswood	*Tilia americana*	
	Poison Ivy	*Toxicodendron radicans*	
	American Elm	*Ulmus americana*	
	Arrowwood	*Viburnum dentatum*	
	Summer Grape	*Vitis aestivalis*	
Herbaceous Plants	White Snakeroot	*Ageratina altissima*	
	Agrimony	*Agrimonia parviflora*	
	Black Bent Grass	*Agrostis gigantea*	
	Garlic Mustard	*Alliaria petiolata*	
	Bog Hemp	*Boehmeria cylindrica*	
	Fringed Sedge	*Carex crinita*	
	Crested Sedge	*Carex cristatella*	
	Inland Sedge	*Carex interior*	
	Orchard Grass	*Dactylis glomerata*	
	Queen Anne's Lace	*Daucus carota*	
	Wood Fern	*Dryopteris marginalis*	
	Horsetail	*Equisetum arvensis*	
	White Wood Aster	*Eurybia divaricata*	
	Large Leaved Aster	*Eurybia macrophylla*	
	Flat-top Goldenrod	*Euthamia graminifolia*	
	Strawberry	*Fragaria virginiana*	

Compilation of Species Observed at Flying Squirrel Preserve

Common Name	Scientific Name	Status
Rough Bedstraw	*Gallium asprellum*	
Yellow Avens	*Geum aleppicum*	
White Avens	*Geum canadense*	
Fowl Manna Grass	*Glyceria striata*	
Moss species	*Helodium paludosum*	
Squirrel-tail Grass	*Hordeum jubatum*	
Jewelweed	*Impatiens capensis*	
Soft Rush	*Juncus effusus*	
Rice Cutgrass	*Leersia oryzoides*	
White Grass	*Leersia virginica*	
Moneywort	*Lysimachia nummularia*	
Monkey Flower	*Mimulus ringens*	
Sensitive Fern	*Onoclea sensibilis*	
Virginia Creeper	*Parthenocissus quinquefolia*	
Ditch Stonecrop	*Penthorum sedoides*	
Swamp Smartweed	*Persicaria hydropiperoides*	
Arrowleaf Tearthumb	*Persicaria saggittata*	
Virginia Knotweed	*Persicaria virginiana*	
Reed Canary Grass	*Phalaris arundinacea*	
Common Timothy	*Phleum pratense*	
Clearweed	*Pilea pumila*	
Christmas Fern	*Polystichum acrostichoides*	
Cinquefoil	*Potentilla simplex*	
Bull Rush	*Scirpus atrovirens*	
Greenbriar	*Smilax rotundifolia*	
Tall Goldenrod	*Solidago altissima*	
Canada Goldenrod	*Solidago canadensis*	
White Heath Aster	*Symphyotrichum ericoides*	
New England Aster	*Symphyotrichum novae-angliae*	
Small White Aster	*Symphiotrichum pilosus*	
Dandelion	*Taraxacum officinale*	
Turkey Tail Fungus	*Trametes versicolur*	
Red Clover	*Trifolium pratense*	
White Clover	*Trifolium repens*	
Stinging Nettle	*Urtica dioica*	
White Vervain	*Verbena urticifolia*	
Yellow Ironweed	*Verbesina alternifolia*	
Tall Ironweed	*Vernonia alitissma*	
New York Ironweed	*Vernonia noveboracensis*	
Round-leaved Violet	*Viola rotundifolia*	
Common Blue Violet	*Viola sororia*	

PRIMARY HEADWATER HABITAT EVALUATION INDEX

(HHEI)

CHAGRIN VALLEY ENGINEERING, LTD.
Creative Engineers. Intelligent Solutions.

Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 67

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County

Stream 01 & Stream 02 — SITE NUMBER: — RIVER BASIN: 05040003 0202 — DRAINAGE AREA (mi²): 0.08

LENGTH OF STREAM REACH (ft): 200 — LAT.: 40.49245 — LONG.: -82.66147 — RIVER CODE: — RIVER MILE: 1180

DATE: 11/05/18 — SCORER: CVE — COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☑ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	8%
☐☐	BOULDER (>256 mm) [16 pts]	5%	☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	10%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☐☐	COBBLE (65-256 mm) [12 pts]	20%	☐☑	CLAY or HARDPAN [0 pt]	20%
☑☐	GRAVEL (2-64 mm) [9 pts]	25%	☐☐	MUCK [0 pts]	0%
☐☐	SAND (<2 mm) [6 pts]	10%	☐☐	ARTIFICIAL [3 pts]	2%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 25.00% (A) — Substrate Percentage Check — (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 — **TOTAL NUMBER OF SUBSTRATE TYPES:** 8

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☑ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: — **MAXIMUM POOL DEPTH (centimeters):** 29

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 (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: — **AVERAGE BANKFULL WIDTH (meters):** 1.60

HHEI Metric Points

Substrate Max = 40	17
A + B	
Pool Depth Max = 30	30
Bankfull Width Max=30	20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L R	FLOODPLAIN QUALITY (Most Predominant per Bank) L R	L R
☑☑ Wide >10m	☐☐ Mature Forest, Wetland	☐☐ Conservation Tillage
☐☐ 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)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☐ 0.5
- ☑ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☑ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Chester Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 10%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 13.40 Dissolved Oxygen (mg/l) _____ pH (S.U.) 8.02 Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

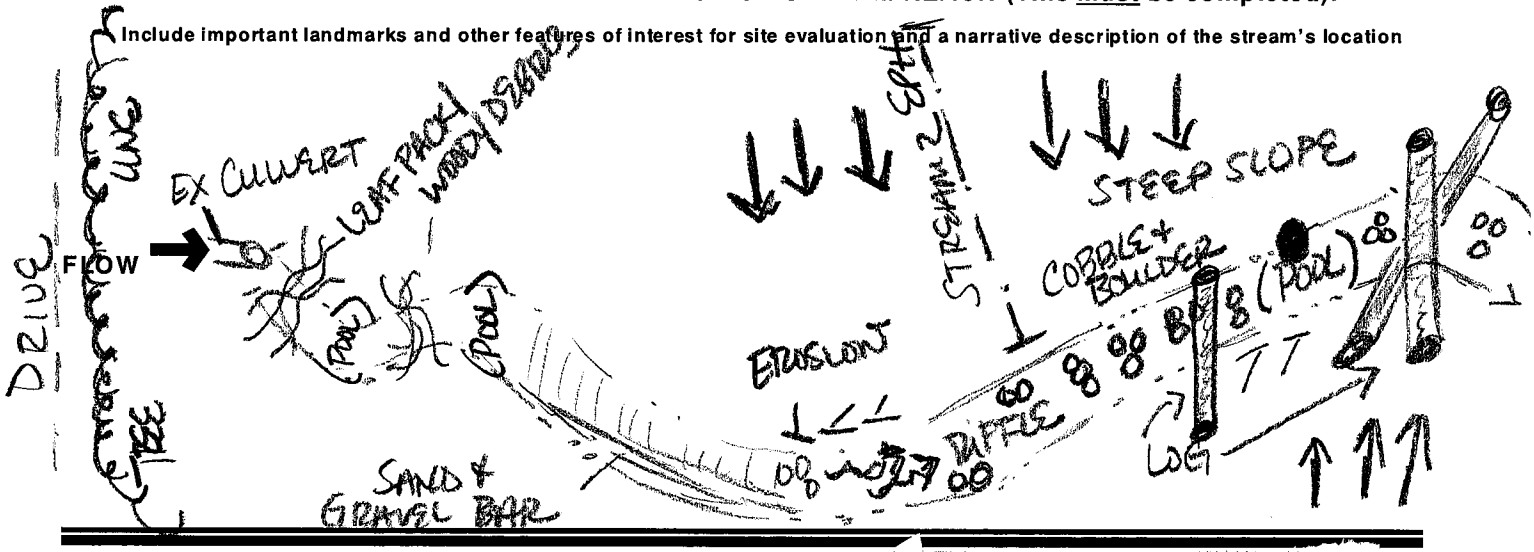
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) Y Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 29

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County
Stream 03 — SITE NUMBER: — RIVER BASIN: 05040003 0202 — DRAINAGE AREA (mi²): 0.00
LENGTH OF STREAM REACH (ft): 200 — LAT.: 40.49220 — LONG.: -82.66172 — RIVER CODE: — RIVER MILE: 1180
DATE: 11/05/18 — SCORER: CVE — COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	10%
☐☐	BOULDER (>256 mm) [16 pts]	10%	☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☑☐	COBBLE (65-256 mm) [12 pts]	25%	☐☑	CLAY or HARDPAN [0 pt]	20%
☐☐	GRAVEL (2-64 mm) [9 pts]	15%	☐☐	MUCK [0 pts]	0%
☐☐	SAND (<2 mm) [6 pts]	5%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 35.00% (A) — Substrate Percentage Check — (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 **TOTAL NUMBER OF SUBSTRATE TYPES:** 7

HHEI Metric Points
Substrate Max = 40: 19
A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐ > 30 centimeters [20 pts]
☐ > 22.5 - 30 cm [30 pts]
☐ > 10 - 22.5 cm [25 pts]
☐ > 5 cm - 10 cm [15 pts]
☑ < 5 cm [5 pts]
☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 3

Pool Depth Max = 30: 5

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 (> 9' 7" - 4' 8") [20 pts]
☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☑ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 0.70

Bankfull Width Max=30: 5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

☑ Stream Flowing
☐ Subsurface flow with isolated pools (Interstitial)
☐ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None ☑ 0.5 ☐ 1.0 ☐ 1.5 ☐ 2.0 ☐ 2.5 ☐ 3.0 ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☑ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Chester Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 40%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 13.00 Dissolved Oxygen (mg/l) _____ pH (S.U.) 8.05 Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

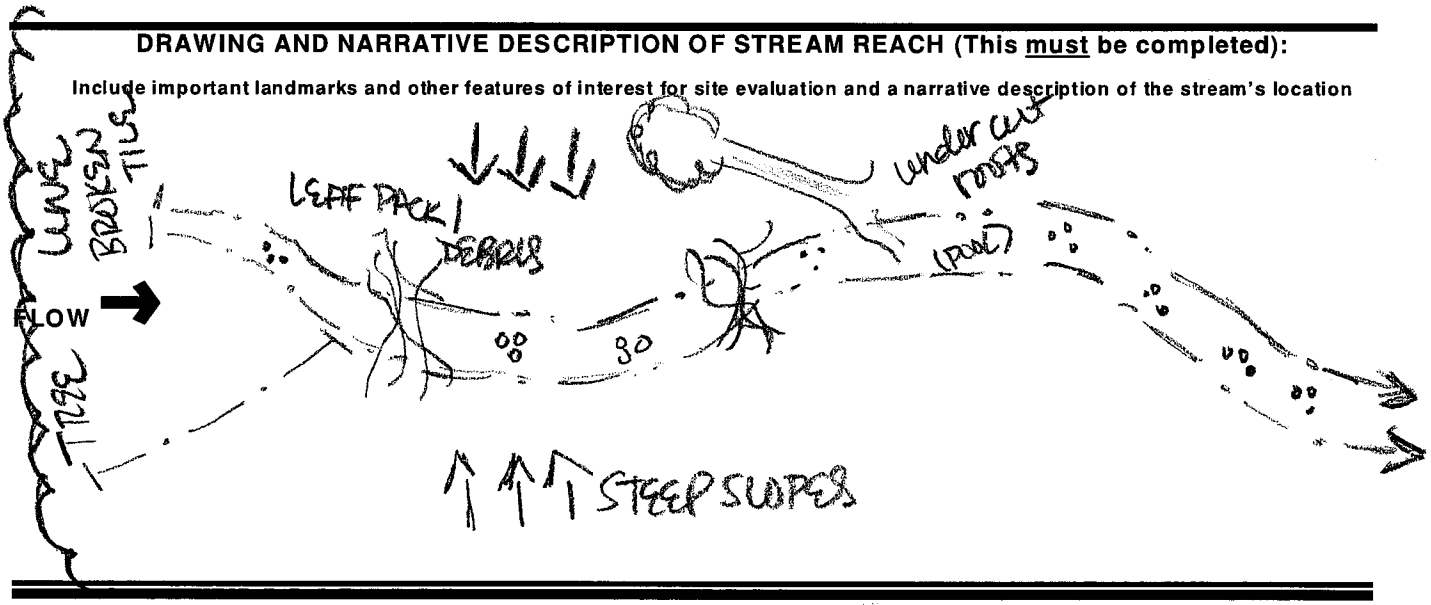
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 44

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County
Stream 04 — SITE NUMBER: — RIVER BASIN: 05040003 0202 — DRAINAGE AREA (mi²): 0.00
LENGTH OF STREAM REACH (ft): 95 — LAT.: 40.49178 — LONG.: -82.66150 — RIVER CODE: — RIVER MILE: 1180
DATE: 11/05/18 — SCORER: CVE — COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. **SUBSTRATE (Estimate percent of every type of substrate present.** Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	0%
☐☐	BOULDER (>256 mm) [16 pts]	10%	☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☐☐	COBBLE (65-256 mm) [12 pts]	15%	☐☑	CLAY or HARDPAN [0 pt]	20%
☑☐	GRAVEL (2-64 mm) [9 pts]	40%	☐☐	MUCK [0 pts]	0%
☐☐	SAND (<2 mm) [6 pts]	0%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 25.00% (A) — Substrate Percentage Check — (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 **TOTAL NUMBER OF SUBSTRATE TYPES:** 5

HHEI Metric Points
Substrate Max = 40: 14
A + B

2. **Maximum Pool Depth** ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐ > 30 centimeters [20 pts]
☐ > 22.5 - 30 cm [30 pts]
☐ > 10 - 22.5 cm [25 pts]
☑ > 5 cm - 10 cm [15 pts]
☐ < 5 cm [5 pts]
☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 5

Pool Depth Max = 30: 15

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 (> 9' 7" - 4' 8") [20 pts]
☑ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 1.30

Bankfull Width Max=30: 15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

☑ Stream Flowing
☐ Subsurface flow with isolated pools (Interstitial)
☐ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None ☑ 0.5 ☐ 1.0 ☐ 1.5 ☐ 2.0 ☐ 2.5 ☐ 3.0 ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Chester Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 30%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 12.40 Dissolved Oxygen (mg/l) _____ pH (S.U.) 7.98 Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

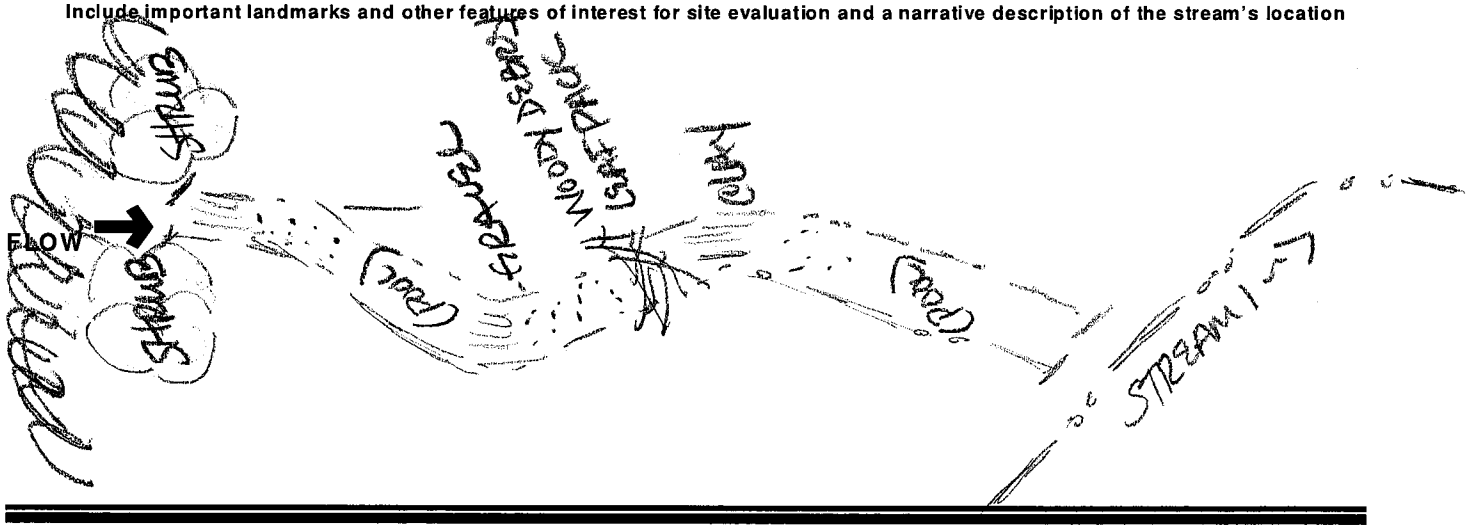
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 39

SITE NAME/LOCATION: 7130 CR 121 : Chester Twp, Morrow County

Stream 05 SITE NUMBER: | RIVER BASIN: 05040003 0202 | DRAINAGE AREA (mi²): 0.00

LENGTH OF STREAM REACH (ft): 121 | LAT.: 40.49151 | LONG.: -82.66135 | RIVER CODE: | RIVER MILE: 1180

DATE: 11/05/18 | SCORER: CVE | COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	10%
☐☐	BOULDER (>256 mm) [16 pts]	15%	☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	5%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☑☐	COBBLE (65-256 mm) [12 pts]	25%	☐☑	CLAY or HARDPAN [0 pt]	20%
☐☐	GRAVEL (2-64 mm) [9 pts]	15%	☐☐	MUCK [0 pts]	0%
☐☐	SAND (<2 mm) [6 pts]	10%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 40.00% (A) | Substrate Percentage Check | (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 **TOTAL NUMBER OF SUBSTRATE TYPES:** 7

HHEI Metric Points

Substrate Max = 40

19

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☑ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 4

Pool Depth Max = 30

5

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 (> 9' 7" - 4' 8") [20 pts]
- ☑ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 1.40

Bankfull Width Max=30

15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☐ 0.5
- ☑ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Chester Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 30%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 12.60 Dissolved Oxygen (mg/l) _____ pH (S.U.) 8.17 Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

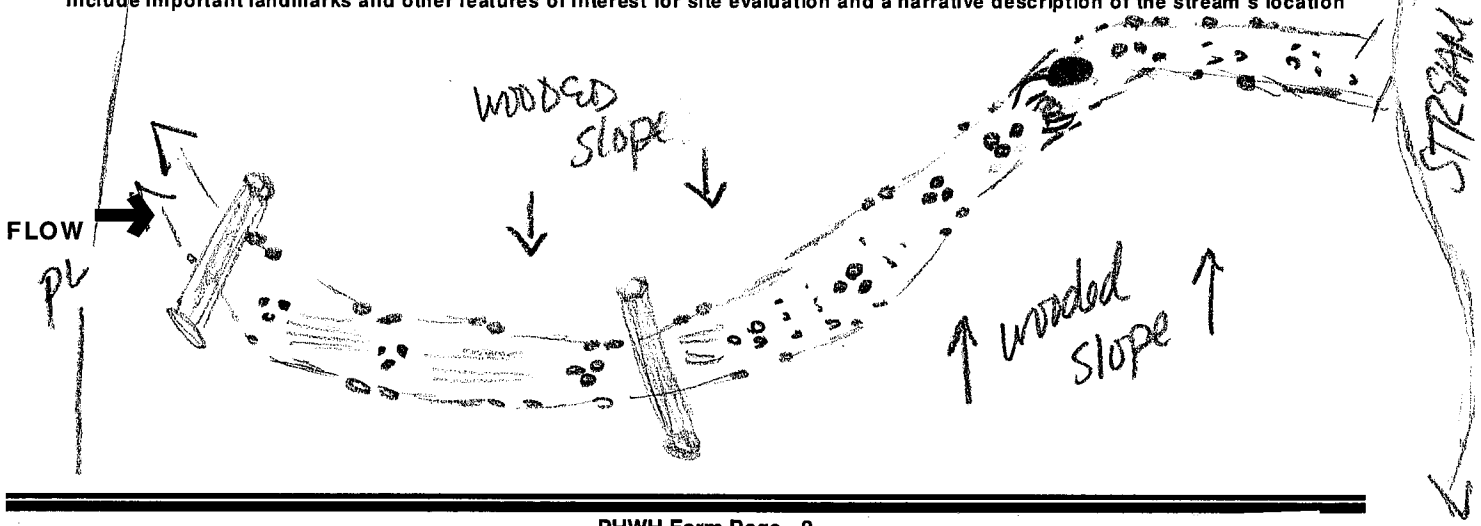
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 48

SITE NAME/LOCATION: 7130 CR 121 - Chester Twp, Morrow County
Stream 06 SITE NUMBER: RIVER BASIN: 05040003 0202 DRAINAGE AREA (mi²): 0.00
LENGTH OF STREAM REACH (ft): 147 LAT.: 40.49191 LONG.: -82.66192 RIVER CODE: RIVER MILE: 1180
DATE: 11/05/18 SCORER: CVE COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. **SUBSTRATE (Estimate percent of every type of substrate present.** Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS [16 pts]	0%	☐ ☐	SILT [3 pt]	5%
☐ ☐	BOULDER (>256 mm) [16 pts]	15%	☐ ☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐ ☐	BEDROCK [16 pt]	0%	☐ ☐	FINE DETRITUS [3 pts]	0%
☑ ☐	COBBLE (65-256 mm) [12 pts]	25%	☐ ☑	CLAY or HARDPAN [0 pt]	20%
☐ ☐	GRAVEL (2-64 mm) [9 pts]	20%	☐ ☐	MUCK [0 pts]	0%
☐ ☐	SAND (<2 mm) [6 pts]	0%	☐ ☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 40.00% (A) Substrate Percentage Check (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 **TOTAL NUMBER OF SUBSTRATE TYPES:** 6

HHEI Metric Points
Substrate Max = 40
18
A + B

2. **Maximum Pool Depth** ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐ > 30 centimeters [20 pts]
☐ > 22.5 - 30 cm [30 pts]
☐ > 10 - 22.5 cm [25 pts]
☑ > 5 cm - 10 cm [15 pts]
☐ < 5 cm [5 pts]
☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 5

Pool Depth Max = 30
15

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 (> 9' 7" - 4' 8") [20 pts]
☑ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 1.60

Bankfull Width Max=30
15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

☑ Stream Flowing
☐ Subsurface flow with isolated pools (Interstitial)
☐ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None ☑ 0.5 ☐ 1.0 ☐ 1.5 ☐ 2.0 ☐ 2.5 ☐ 3.0 ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Chester Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 30%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 11.40 Dissolved Oxygen (mg/l) _____ pH (S.U.) 8.25 Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

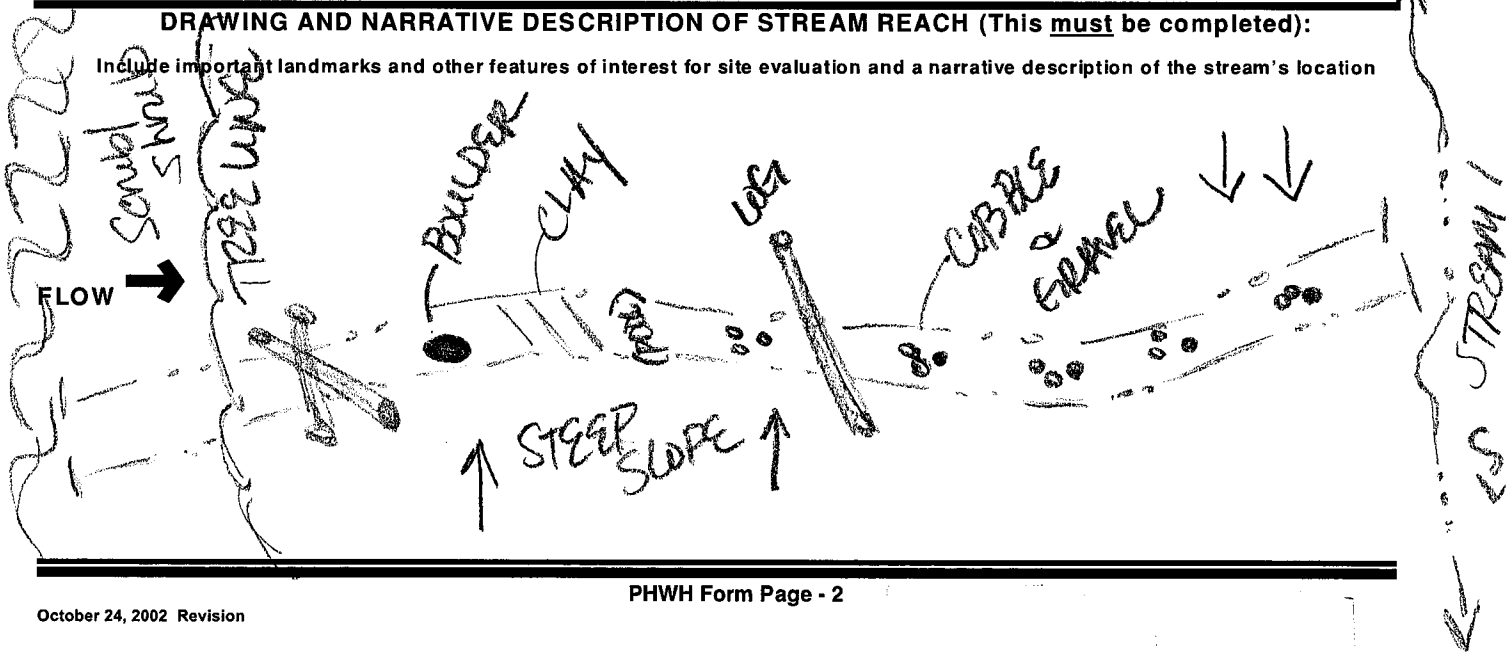
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 80

SITE NAME/LOCATION: 7130 CR 121 Chester Twp, Morrow County
Stream 07 SITE NUMBER: RIVER BASIN: 05040003 0202 DRAINAGE AREA (mi²): 0.01
LENGTH OF STREAM REACH (ft): 200 LAT.: 40.48942 LONG.: -82.66141 RIVER CODE: RIVER MILE: 1180
DATE: 11/05/18 SCORER: CVE COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☐	SILT [3 pt]	10%
☑	BOULDER (>256 mm) [16 pts]	25%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	5%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☑	COBBLE (65-256 mm) [12 pts]	35%	☐	CLAY or HARDPAN [0 pt]	10%
☐	GRAVEL (2-64 mm) [9 pts]	10%	☐	MUCK [0 pts]	0%
☐	SAND (<2 mm) [6 pts]	5%	☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 60.00% (A) Substrate Percentage Check (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 28 **TOTAL NUMBER OF SUBSTRATE TYPES:** 7

HHEI Metric Points
Substrate Max = 40 35
A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☑ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 11

Pool Depth Max = 30 25

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 (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 2.00

Bankfull Width Max=30 20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☑	☑	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☑ 0.5
- ☐ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Chester Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 30%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 12.00 Dissolved Oxygen (mg/l) _____ pH (S.U.) 7.87 Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

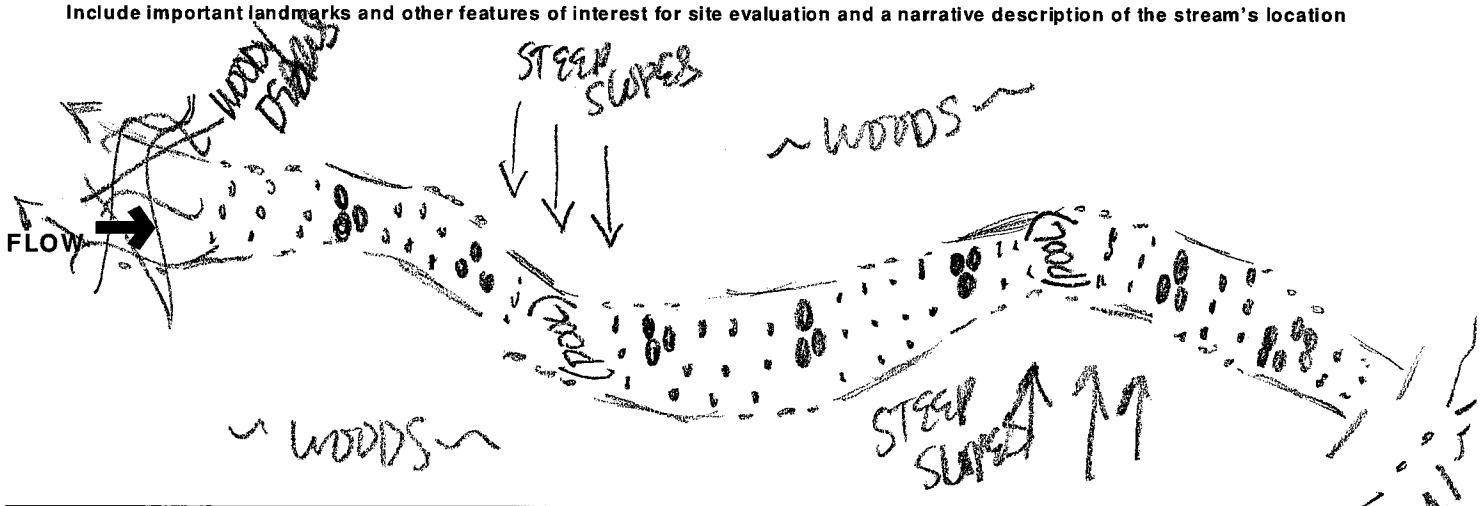
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 79

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County
Stream 08 — SITE NUMBER: — RIVER BASIN: 05040003 0202 — DRAINAGE AREA (mi²): 0.01
LENGTH OF STREAM REACH (ft): 200 — LAT.: 40.48943 — LONG.: -82.66310 — RIVER CODE: — RIVER MILE: 1180
DATE: 11/05/18 — SCORER: CVE — COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☐	SILT [3 pt]	5%
☑	BOULDER (>256 mm) [16 pts]	25%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☑	COBBLE (65-256 mm) [12 pts]	35%	☐	CLAY or HARDPAN [0 pt]	0%
☐	GRAVEL (2-64 mm) [9 pts]	15%	☐	MUCK [0 pts]	0%
☐	SAND (<2 mm) [6 pts]	5%	☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 60.00% (A) — Substrate Percentage Check — (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 28 **TOTAL NUMBER OF SUBSTRATE TYPES:** 6

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☑ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 12

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 (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 2.00

HHEI Metric Points

	Max	Score
Substrate	40	34
A + B		
Pool Depth	30	25
Bankfull Width	30	20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R		FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☑	☑	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☐ 0.5
- ☑ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: **Chesterville** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Morrow** Township / City: **Chester Twp**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **11/05/18** Quantity: **0.00**

Photograph Information: **included**

Elevated Turbidity? (Y/N): **N** Canopy (% open): **30%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) **10.90** Dissolved Oxygen (mg/l) _____ pH (S.U.) **8.09** Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **Y** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

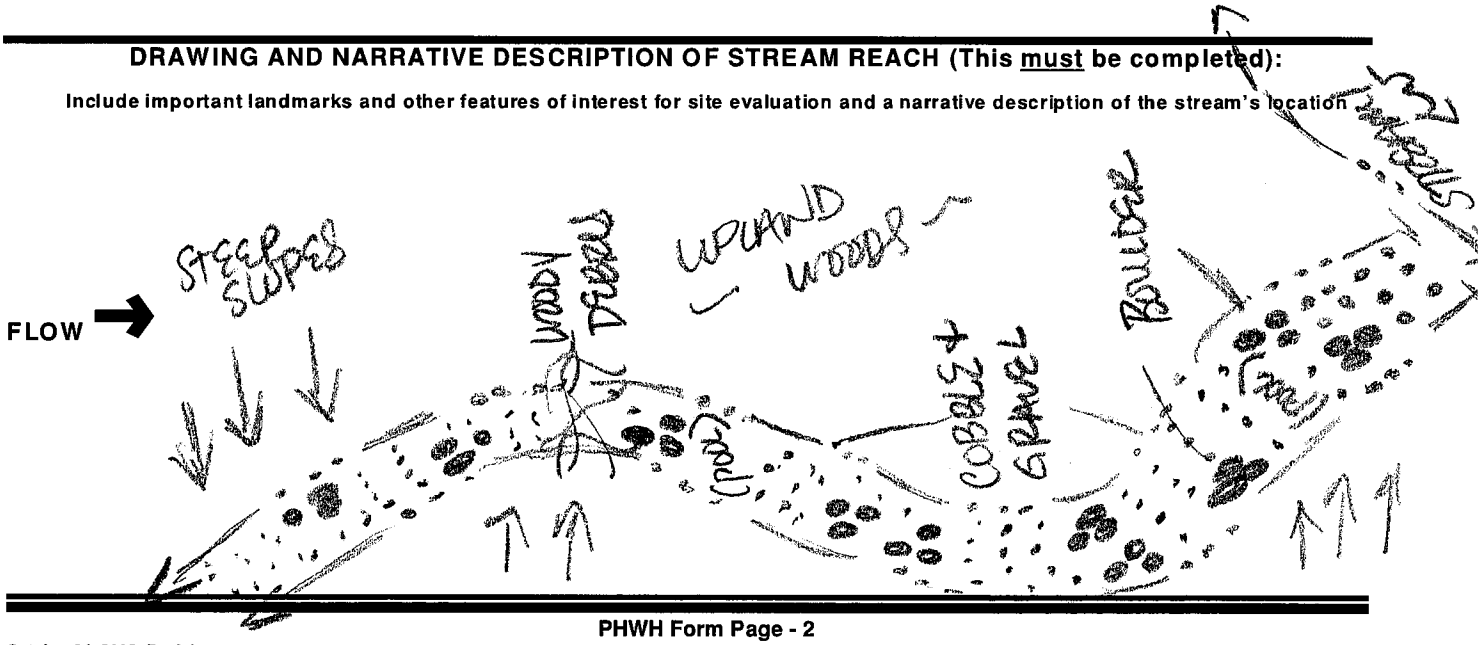
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 58

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County
Stream 09 — SITE NUMBER: — RIVER BASIN: 05040003 0202 — DRAINAGE AREA (mi²): 0.00
LENGTH OF STREAM REACH (ft): 200 — LAT.: 40.49018 — LONG.: -82.66299 — RIVER CODE: — RIVER MILE: 1180
DATE: 11/05/18 — SCORER: CVE — COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	5%
☐☐	BOULDER (>256 mm) [16 pts]	15%	☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☑☐	COBBLE (65-256 mm) [12 pts]	30%	☐☐	CLAY or HARDPAN [0 pt]	10%
☐☑	GRAVEL (2-64 mm) [9 pts]	20%	☐☐	MUCK [0 pts]	0%
☐☐	SAND (<2 mm) [6 pts]	5%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 45.00% (A) — Substrate Percentage Check — (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 **TOTAL NUMBER OF SUBSTRATE TYPES:** 7

HHEI Metric Points
Substrate Max = 40: 28
A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐ > 30 centimeters [20 pts]
☐ > 22.5 - 30 cm [30 pts]
☐ > 10 - 22.5 cm [25 pts]
☑ > 5 cm - 10 cm [15 pts]
☐ < 5 cm [5 pts]
☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 6

Pool Depth Max = 30: 15

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 (> 9' 7" - 4' 8") [20 pts]
☑ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 1.30

Bankfull Width Max=30: 15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

☑ Stream Flowing
☐ Subsurface flow with isolated pools (Interstitial)
☐ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None ☐ 0.5 ☑ 1.0 ☐ 1.5 ☐ 2.0 ☐ 2.5 ☐ 3.0 ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Chester Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 10%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 11.30 Dissolved Oxygen (mg/l) _____ pH (S.U.) 7.97 Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

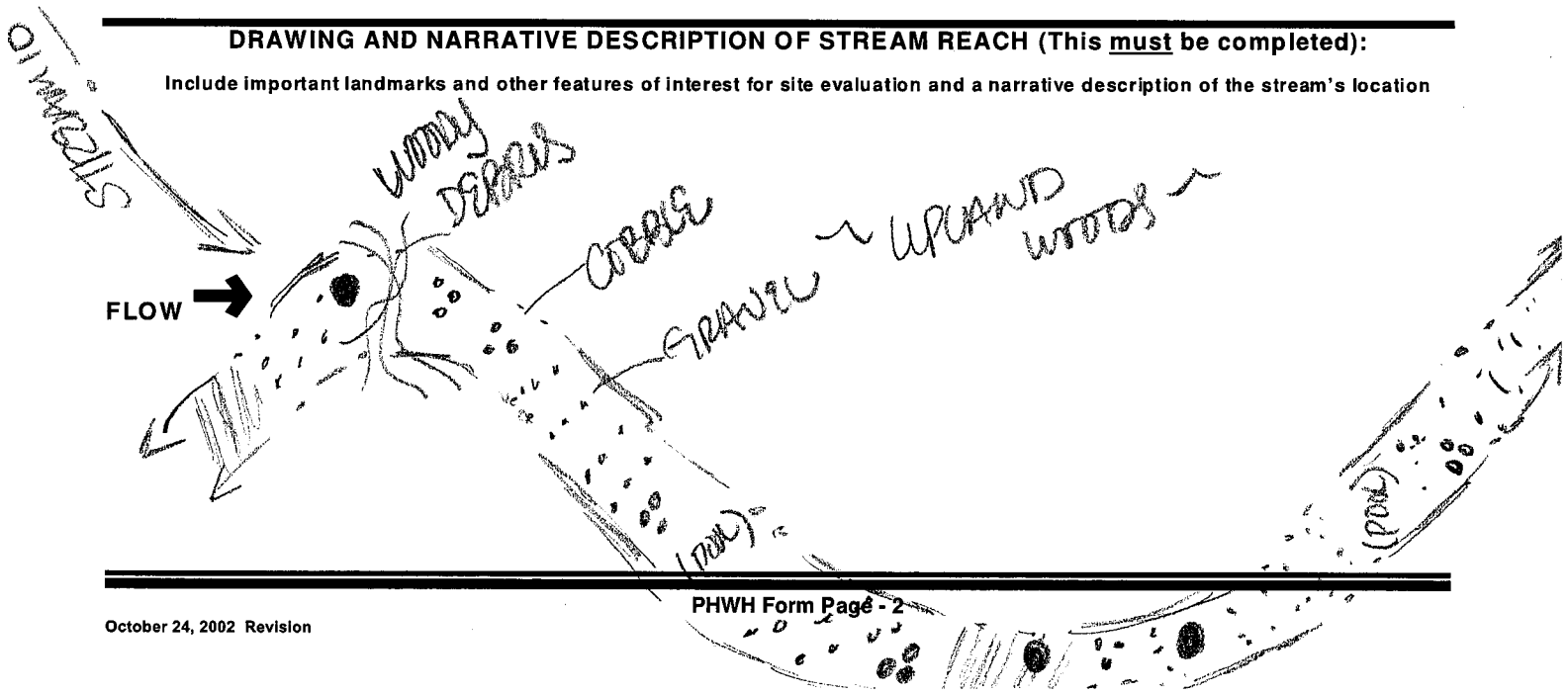
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 26

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County
Stream 10 — SITE NUMBER: — RIVER BASIN: 05040003 0202 — DRAINAGE AREA (mi²): 0.00
LENGTH OF STREAM REACH (ft): 200 — LAT.: 40.49076 — LONG.: -82.66232 — RIVER CODE: — RIVER MILE: 1180
DATE: 11/05/18 — SCORER: CVE — COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS [16 pts]	0%	☐ ☐	SILT [3 pt]	5%
☐ ☐	BOULDER (>256 mm) [16 pts]	5%	☐ ☐	LEAF PACK/WOODY DEBRIS [3 pts]	20%
☐ ☐	BEDROCK [16 pt]	0%	☐ ☐	FINE DETRITUS [3 pts]	0%
☐ ☐	COBBLE (65-256 mm) [12 pts]	10%	☐ ☑	CLAY or HARDPAN [0 pt]	35%
☑ ☐	GRAVEL (2-64 mm) [9 pts]	20%	☐ ☐	MUCK [0 pts]	0%
☐ ☐	SAND (<2 mm) [6 pts]	5%	☐ ☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 15.00% (A) — Substrate Percentage Check — (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 **TOTAL NUMBER OF SUBSTRATE TYPES:** 7

HHEI Metric Points
Substrate Max = 40: 16
A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☑ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):**

Pool Depth Max = 30: 5

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 (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☑ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 0.90

Bankfull Width Max=30: 5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

- ☐ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☑ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☑ 0.5
- ☐ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: **Chesterville** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Morrow** Township / City: **Franklin Twp & Chester Twp**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **11/05/18** Quantity: **0.00**

Photograph Information: **included**

Elevated Turbidity? (Y/N): **N** Canopy (% open): **10%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **N** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

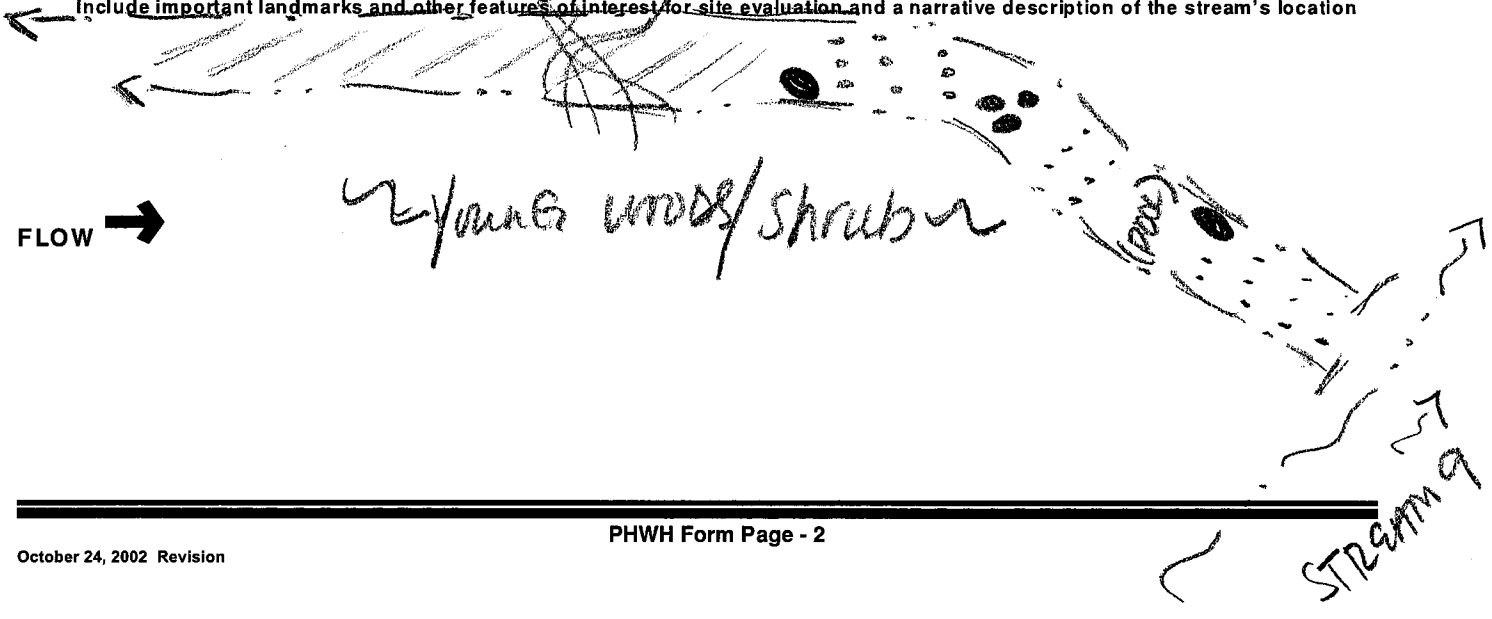
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 13

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County
Stream 11 — SITE NUMBER: — RIVER BASIN: 05040003 0202 — DRAINAGE AREA (mi²): 0.00
LENGTH OF STREAM REACH (ft): 96 — LAT.: 40.49036 — LONG.: -82.66384 — RIVER CODE: — RIVER MILE: 1180
DATE: 11/05/18 — SCORER: CVE — COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. **SUBSTRATE (Estimate percent of every type of substrate present.** Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	5%
☐☐	BOULDER (>256 mm) [16 pts]	0%	☑☐	LEAF PACK/WOODY DEBRIS [3 pts]	30%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	10%
☐☐	COBBLE (65-256 mm) [12 pts]	0%	☐☑	CLAY or HARDPAN [0 pt]	50%
☐☐	GRAVEL (2-64 mm) [9 pts]	0%	☐☐	MUCK [0 pts]	0%
☐☐	SAND (<2 mm) [6 pts]	5%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 0.00% (A) — Substrate Percentage Check — (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 **TOTAL NUMBER OF SUBSTRATE TYPES:** 5

HHEI Metric Points

Substrate Max = 40: 8

A + B

2. **Maximum Pool Depth** ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐ > 30 centimeters [20 pts]
☐ > 22.5 - 30 cm [30 pts]
☐ > 10 - 22.5 cm [25 pts]
☐ > 5 cm - 10 cm [15 pts]
☐ < 5 cm [5 pts]
☑ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):**

Pool Depth Max = 30: 0

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 (> 9' 7" - 4' 8") [20 pts]
☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☑ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 0.80

Bankfull Width Max=30: 5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☐	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☑	☐	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)* (Check *ONLY* one box):

☐ Stream Flowing
☐ Subsurface flow with isolated pools (Interstitial)
☑ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☑ None ☐ 0.5 ☐ 1.0 ☐ 1.5 ☐ 2.0 ☐ 2.5 ☐ 3.0 ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: **Chesterville** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Morrow** Township / City: **Chester Twp**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **11/05/18** Quantity: **0.00**

Photograph Information: **included**

Elevated Turbidity? (Y/N): **N** Canopy (% open): **10%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **N** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

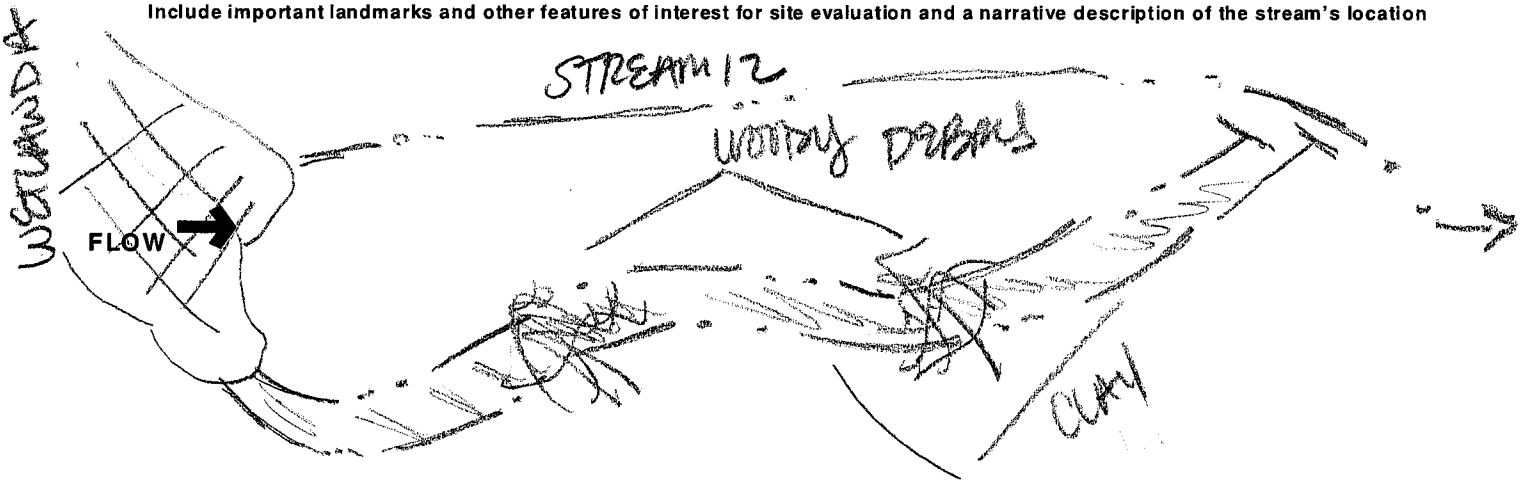
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 27

SITE NAME/LOCATION: 7130 CR 121 Chester Twp, Morrow County
Stream 12 SITE NUMBER: RIVER BASIN: 05040003 0202 DRAINAGE AREA (mi²): 0.00
LENGTH OF STREAM REACH (ft): 200 LAT.: 40.49030 LONG.: -82.66363 RIVER CODE: RIVER MILE: 1180
DATE: 11/05/18 SCORER: CVE COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS [16 pts]	0%	☐ ☐	SILT [3 pt]	5%
☐ ☐	BOULDER (>256 mm) [16 pts]	10%	☐ ☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐ ☐	BEDROCK [16 pt]	0%	☐ ☐	FINE DETRITUS [3 pts]	0%
☐ ☐	COBBLE (65-256 mm) [12 pts]	15%	☐ ☑	CLAY or HARDPAN [0 pt]	15%
☑ ☐	GRAVEL (2-64 mm) [9 pts]	25%	☐ ☐	MUCK [0 pts]	0%
☐ ☐	SAND (<2 mm) [6 pts]	5%	☐ ☐	ARTIFICIAL [3 pts]	10%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 25.00% (A) Substrate Percentage Check (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 **TOTAL NUMBER OF SUBSTRATE TYPES:** 8

HHEI Metric Points
Substrate Max = 40
17
A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐ > 30 centimeters [20 pts]
☐ > 22.5 - 30 cm [30 pts]
☐ > 10 - 22.5 cm [25 pts]
☐ > 5 cm - 10 cm [15 pts]
☑ < 5 cm [5 pts]
☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 3

Pool Depth Max = 30
5

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 (> 9' 7" - 4' 8") [20 pts]
☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☑ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 0.80

Bankfull Width Max=30
5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

☐ Stream Flowing
☑ Subsurface flow with isolated pools (Interstitial)
☐ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None ☑ 0.5 ☐ 1.0 ☐ 1.5 ☐ 2.0 ☐ 2.5 ☐ 3.0 ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Chester Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 10%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

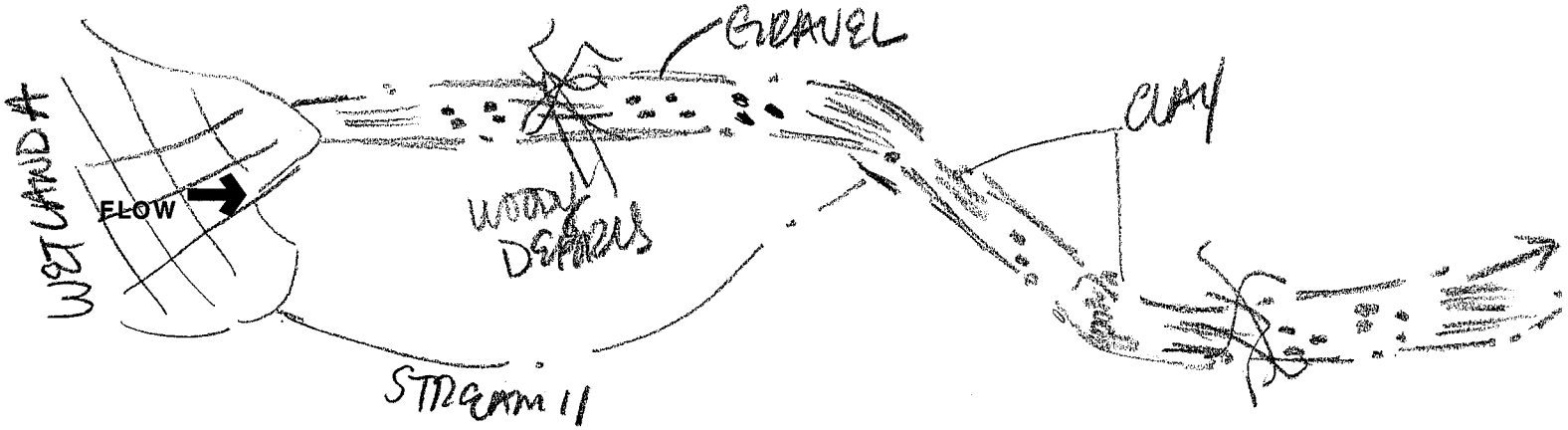
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 18

SITE NAME/LOCATION: 7130 CR 121 Chester Twp, Morrow County
Stream 13 SITE NUMBER: RIVER BASIN: 05040003 0202 DRAINAGE AREA (mi²): 0.00
LENGTH OF STREAM REACH (ft): 102 LAT.: 40.48986 LONG.: -82.66417 RIVER CODE: RIVER MILE: 1180
DATE: 11/05/18 SCORER: CVE COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	10%
☐☐	BOULDER (>256 mm) [16 pts]	0%	☑☐	LEAF PACK/WOODY DEBRIS [3 pts]	25%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☐☐	COBBLE (65-256 mm) [12 pts]	0%	☐☑	CLAY or HARDPAN [0 pt]	40%
☐☐	GRAVEL (2-64 mm) [9 pts]	15%	☐☐	MUCK [0 pts]	0%
☐☐	SAND (<2 mm) [6 pts]	10%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 0.00% (A) Substrate Percentage Check (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 **TOTAL NUMBER OF SUBSTRATE TYPES:** 5

HHEI Metric Points

Substrate Max = 40: 8

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☑ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 1

Pool Depth Max = 30: 5

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 (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☑ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 0.70

Bankfull Width Max=30: 5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

- ☐ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☑ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☑ 0.5
- ☐ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: **Chesterville** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Morrow** Township / City: **Chester Twp**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: _____ Quantity: **0.00**

Photograph Information: **included**

Elevated Turbidity? (Y/N): **N** Canopy (% open): **5%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **N** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

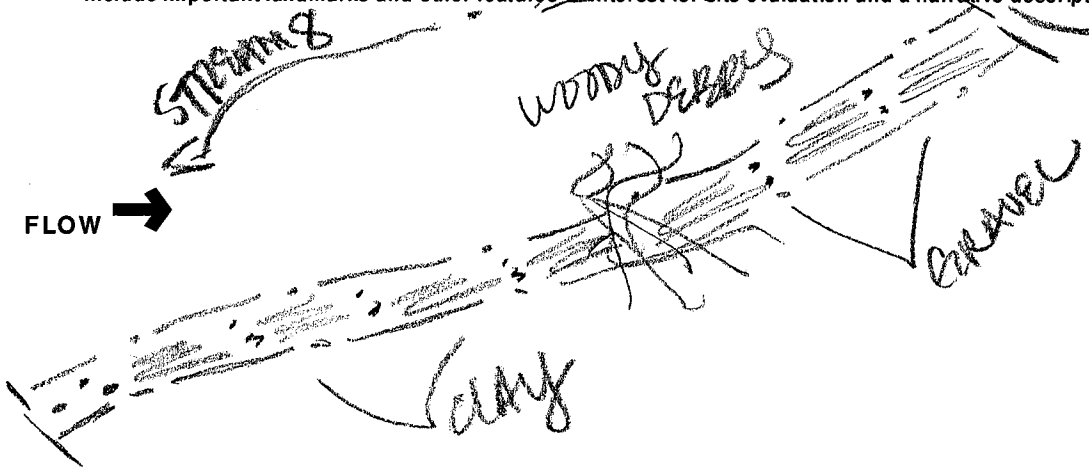
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 72

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County
Stream 14 — SITE NUMBER: — RIVER BASIN: 05040003 0202 — DRAINAGE AREA (mi²): 0.01
LENGTH OF STREAM REACH (ft): 200 — LAT.: 40.49177 — LONG.: -82.66481 — RIVER CODE: — RIVER MILE: 1180
DATE: 11/05/18 — SCORER: CVE — COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	5%
☐☐	BOULDER (>256 mm) [16 pts]	18%	☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	10%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☐☑	COBBLE (65-256 mm) [12 pts]	20%	☐☐	CLAY or HARDPAN [0 pt]	0%
☑☐	GRAVEL (2-64 mm) [9 pts]	35%	☐☐	MUCK [0 pts]	0%
☐☐	SAND (<2 mm) [6 pts]	12%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 38.00% (A) — Substrate Percentage Check: — (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 — **TOTAL NUMBER OF SUBSTRATE TYPES:** 6

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☑ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: — **MAXIMUM POOL DEPTH (centimeters):** 10

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 (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: — **AVERAGE BANKFULL WIDTH (meters):** 2.80

HHEI Metric Points

	Max	Score
Substrate	40	27
A + B		
Pool Depth	30	25
Bankfull Width	30	20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☑	☑	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☐ 0.5
- ☐ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☑ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☑ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: **Chesterville** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Morrow** Township / City: **Chester Twp**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **11/05/18** Quantity: **0.00**

Photograph Information: **included**

Elevated Turbidity? (Y/N): **N** Canopy (% open): **50%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) **12.80** Dissolved Oxygen (mg/l) _____ pH (S.U.) **7.55** Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **Y** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

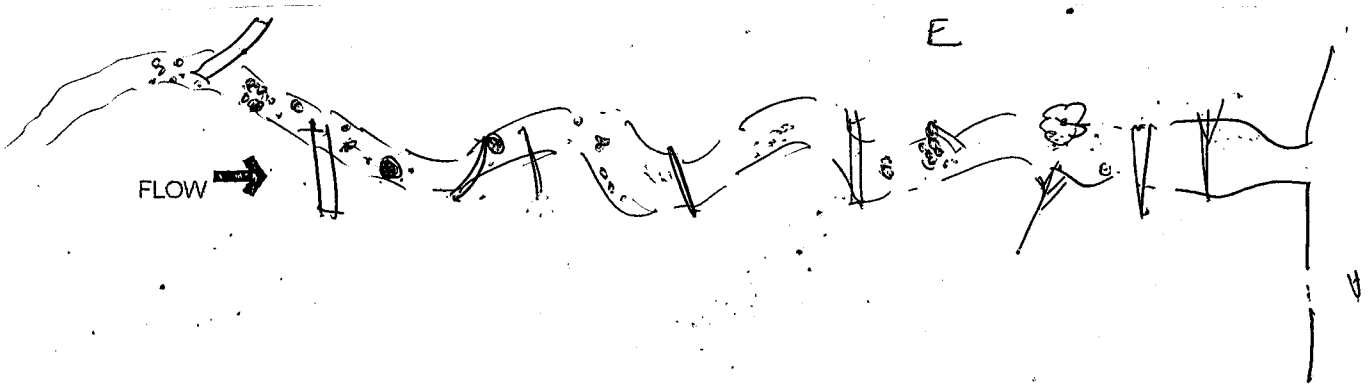
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 68

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County
Stream 15 — SITE NUMBER: — RIVER BASIN: 05040003 0202 — DRAINAGE AREA (mi²): 0.10
LENGTH OF STREAM REACH (ft): — LAT.: 40.49151 — LONG.: -82.66135 — RIVER CODE: — RIVER MILE: 1180
DATE: 11/05/18 — SCORER: CVE — COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. **SUBSTRATE (Estimate percent of every type of substrate present.** Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	18%
☐☐	BOULDER (>256 mm) [16 pts]	10%	☐☑	LEAF PACK/WOODY DEBRIS [3 pts]	22%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☐☐	COBBLE (65-256 mm) [12 pts]	20%	☐☐	CLAY or HARDPAN [0 pt]	0%
☑☐	GRAVEL (2-64 mm) [9 pts]	30%	☐☐	MUCK [0 pts]	0%
☐☐	SAND (<2 mm) [6 pts]	0%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 30.00% (A) — Substrate Percentage Check — (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 **TOTAL NUMBER OF SUBSTRATE TYPES:** 1

HHEI Metric Points

Substrate Max = 40: 13

A + B

2. **Maximum Pool Depth** ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐ > 30 centimeters [20 pts]
☑ > 22.5 - 30 cm [30 pts]
☐ > 10 - 22.5 cm [25 pts]
☐ > 5 cm - 10 cm [15 pts]
☐ < 5 cm [5 pts]
☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 29

Pool Depth Max = 30: 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 (> 9' 7" - 4' 8") [20 pts]
☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 3.10

Bankfull Width Max=30: 25

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☑	☑	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

☑ Stream Flowing
☐ Subsurface flow with isolated pools (Interstitial)
☐ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None ☐ 0.5 ☐ 1.0 ☐ 1.5 ☐ 2.0 ☑ 2.5 ☐ 3.0 ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☑ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: **Chesterville** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Morrow** Township / City: **Chester Twp**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **11/05/18** Quantity: **0.00**

Photograph Information: **included**

Elevated Turbidity? (Y/N): **N** Canopy (% open): **30%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **Y** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

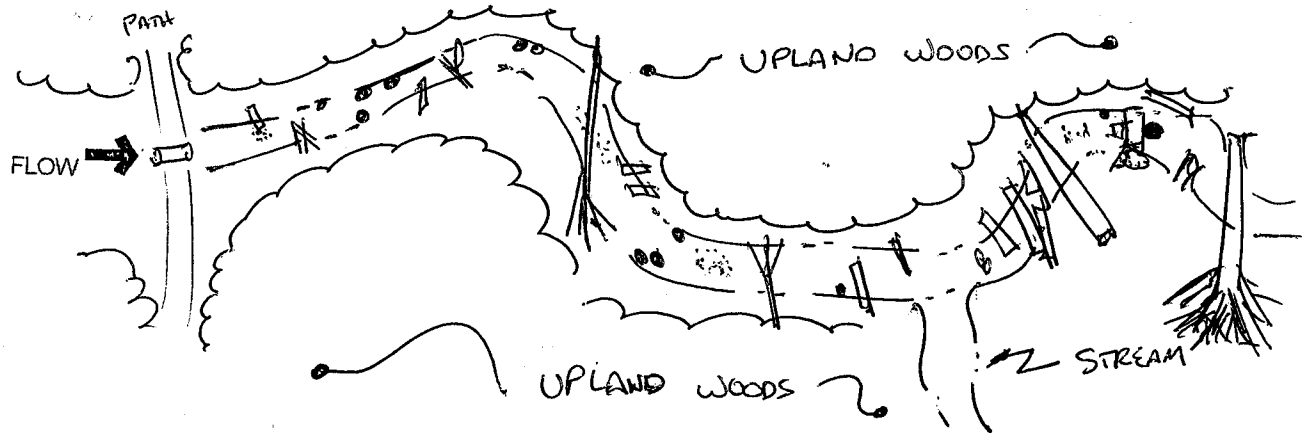
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 77

SITE NAME/LOCATION: 7130 CR 121 Chester Twp, Morrow County

Stream 16 SITE NUMBER: _____ RIVER BASIN: 05040003 0202 DRAINAGE AREA (mi²): 0.01

LENGTH OF STREAM REACH (ft): 200 LAT.: 40.49322 LONG.: -82.66528 RIVER CODE: _____ RIVER MILE: 1180

DATE: 11/05/18 SCORER: CVE COMMENTS: _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	1%	☐	SILT [3 pt]	4%
☐	BOULDER (>256 mm) [16 pts]	16%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	10%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☑	COBBLE (65-256 mm) [12 pts]	23%	☐	CLAY or HARDPAN [0 pt]	0%
☑	GRAVEL (2-64 mm) [9 pts]	37%	☐	MUCK [0 pts]	0%
☐	SAND (<2 mm) [6 pts]	9%	☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 40.00% (A) Substrate Percentage Check (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 **TOTAL NUMBER OF SUBSTRATE TYPES:** 6

HHEI Metric Points

Substrate Max = 40

27

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☑ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: _____ **MAXIMUM POOL DEPTH (centimeters):** 10.1

Pool Depth Max = 30

25

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 (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: _____ **AVERAGE BANKFULL WIDTH (meters):** 3.00

Bankfull Width Max=30

25

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH L	R	(Per Bank)	FLOODPLAIN QUALITY L	R	(Most Predominant per Bank)	L	R	
☑	☑	Wide >10m	☑	☑	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS: _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☐ 0.5
- ☐ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☑ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☑ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Chester Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 20%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 12.90 Dissolved Oxygen (mg/l) _____ pH (S.U.) 7.60 Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

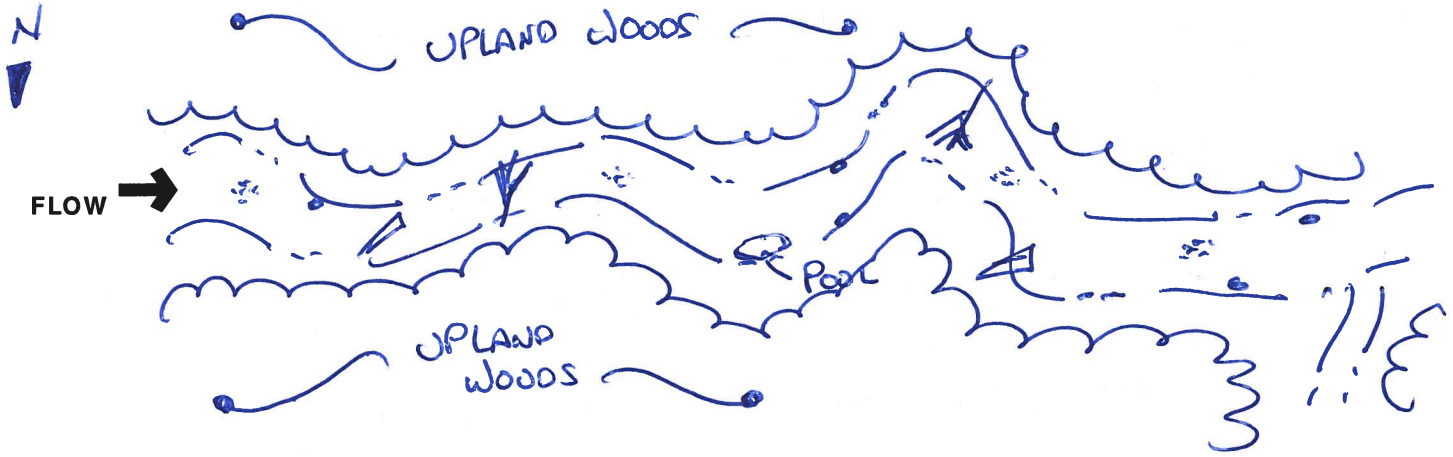
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 57

SITE NAME/LOCATION: 7130 CR 121 Chester Twp, Morrow County

Stream 17 SITE NUMBER: | RIVER BASIN: 05040003 0202 | DRAINAGE AREA (mi²): 0.02

LENGTH OF STREAM REACH (ft): 200 | LAT.: 40.49288 | LONG.: -82.66666 | RIVER CODE: | RIVER MILE: 1180

DATE: 11/05/18 | SCORER: CVE | COMMENTS: Streams 17 & 18 have similar morphology

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS [16 pts]	0%	☐ ☐	SILT [3 pt]	3%
☐ ☐	BOULDER (>256 mm) [16 pts]	13%	☐ ☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐ ☐	BEDROCK [16 pt]	0%	☐ ☐	FINE DETRITUS [3 pts]	0%
☐ ☑	COBBLE (65-256 mm) [12 pts]	32%	☐ ☐	CLAY or HARDPAN [0 pt]	0%
☑ ☐	GRAVEL (2-64 mm) [9 pts]	36%	☐ ☐	MUCK [0 pts]	0%
☐ ☐	SAND (<2 mm) [6 pts]	1%	☐ ☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 45.00% (A) | Substrate Percentage Check | (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 **TOTAL NUMBER OF SUBSTRATE TYPES:** 6

HHEI Metric Points

Substrate Max = 40

27

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☑ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 7

Pool Depth Max = 30

15

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 (> 9' 7" - 4' 8") [20 pts]
- ☑ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 1.50

Bankfull Width Max=30

15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R	L	R
☑	☑ Wide >10m	☑	☑ Mature Forest, Wetland	☐	☐ Conservation Tillage
☐	☐ 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)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None	☐ 1.0	☐ 2.0	☑ 3.0
☐ 0.5	☐ 1.5	☐ 2.5	☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☑ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: **Chesterville** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Morrow** Township / City: **Chester Twp.**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **11/05/18** Quantity: **0.00**

Photograph Information: **included**

Elevated Turbidity? (Y/N): **N** Canopy (% open): **18%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **Y** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

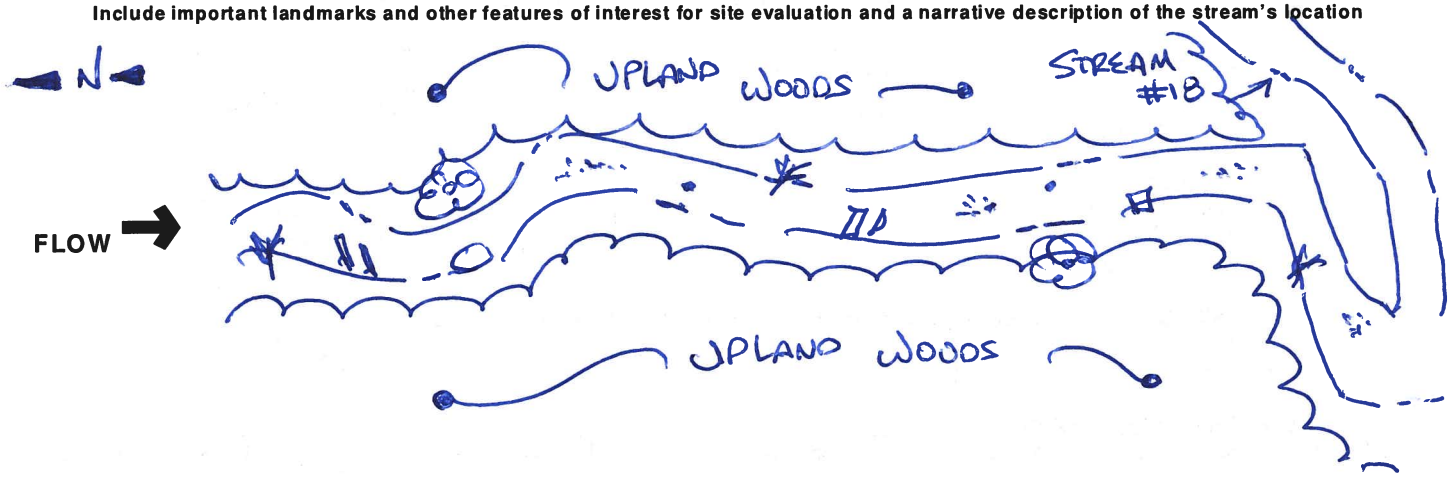
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 41

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County
Stream 20, 21 & 22 SITE NUMBER: | RIVER BASIN: 05040003 0202 | DRAINAGE AREA (mi²): 0.00
LENGTH OF STREAM REACH (ft): 200 | LAT.: 40.49151 | LONG.: -82.66135 | RIVER CODE: | RIVER MILE: 1185
DATE: 11/05/18 | SCORER: CVE | COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	5%
☐☐	BOULDER (>256 mm) [16 pts]	5%	☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☐☐	COBBLE (65-256 mm) [12 pts]	10%	☐☑	CLAY or HARDPAN [0 pt]	25%
☑☐	GRAVEL (2-64 mm) [9 pts]	30%	☐☐	MUCK [0 pts]	0%
☐☐	SAND (<2 mm) [6 pts]	10%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 15.00% (A) | Substrate Percentage Check | (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 **TOTAL NUMBER OF SUBSTRATE TYPES:** 7

HHEI Metric Points
Substrate Max = 40: 16
A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☑ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 4

Pool Depth Max = 30: 5

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 (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 1.60

Bankfull Width Max=30: 20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH L	R	(Per Bank)	FLOODPLAIN QUALITY L	R	(Most Predominant per Bank)	L	R	
☑	☑	Wide >10m	☑	☑	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☐ 0.5
- ☑ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☑ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Chester Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 30%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 13.40 Dissolved Oxygen (mg/l) _____ pH (S.U.) 7.57 Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

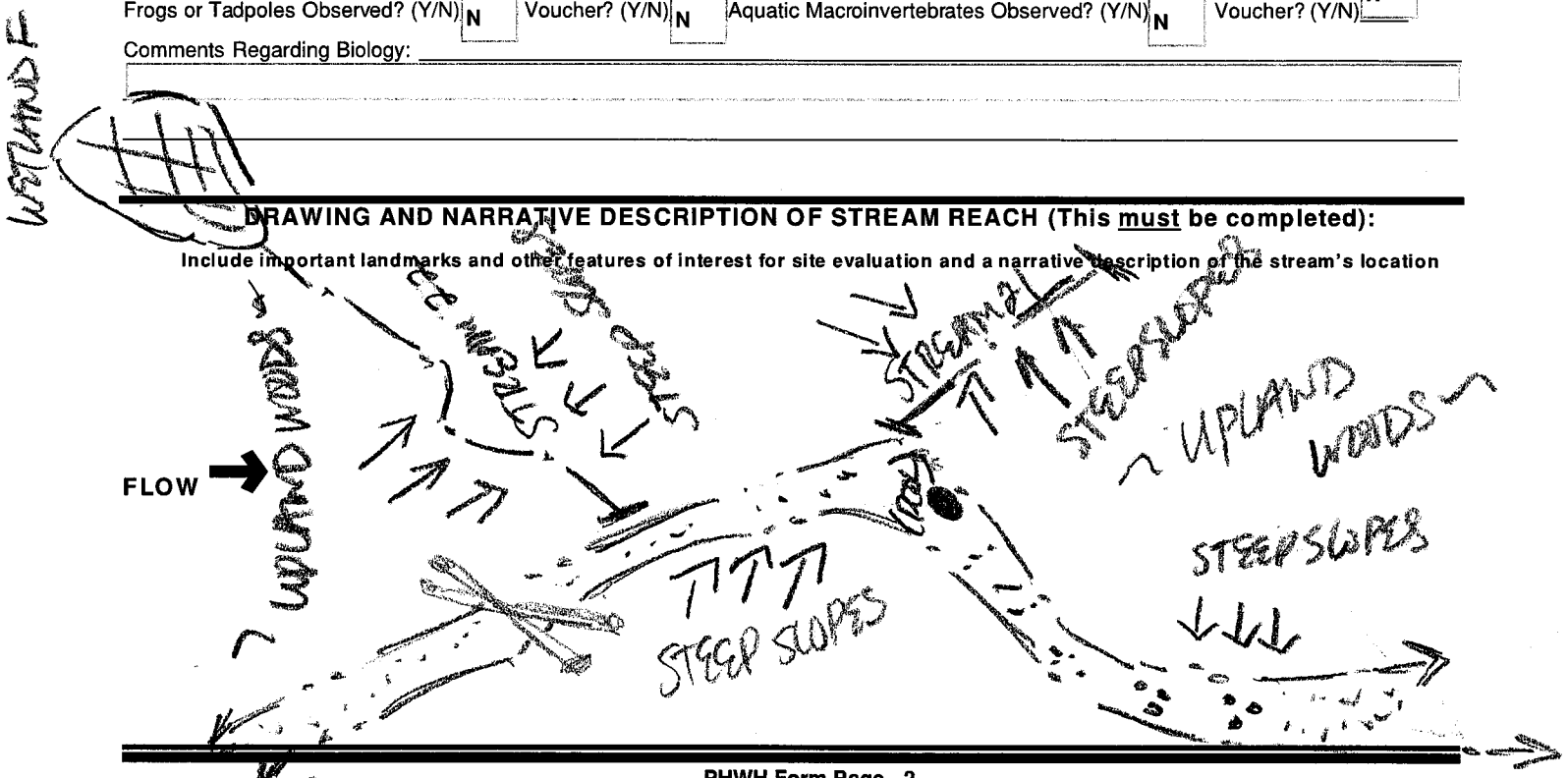
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 30

SITE NAME/LOCATION: 7130 CR 121 Chester Twp, Morrow County
Stream 23 & 24 SITE NUMBER: RIVER BASIN: 05040003 0202 DRAINAGE AREA (mi²): 0.03
LENGTH OF STREAM REACH (ft): 200 LAT.: 40.48714 LONG.: -82.66756 RIVER CODE: RIVER MILE: 1.54
DATE: 11/06/18 SCORER: CVE COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☑ RECOVERING ☐ RECENT OR NO RECOVERY

1. **SUBSTRATE (Estimate percent of every type of substrate present.** Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS [16 pts]	0%	☐ ☑	SILT [3 pt]	20%
☐ ☐	BOULDER (>256 mm) [16 pts]	0%	☐ ☐	LEAF PACK/WOODY DEBRIS [3 pts]	5%
☐ ☐	BEDROCK [16 pt]	0%	☐ ☐	FINE DETRITUS [3 pts]	0%
☐ ☐	COBBLE (65-256 mm) [12 pts]	10%	☐ ☐	CLAY or HARDPAN [0 pt]	15%
☐ ☐	GRAVEL (2-64 mm) [9 pts]	10%	☑ ☐	MUCK [0 pts]	35%
☐ ☐	SAND (<2 mm) [6 pts]	5%	☐ ☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 10.00% (A) Substrate Percentage Check (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 7

HHEI Metric Points
Substrate Max = 40: 10
A + B

2. **Maximum Pool Depth** ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐ > 30 centimeters [20 pts]
☐ > 22.5 - 30 cm [30 pts]
☐ > 10 - 22.5 cm [25 pts]
☐ > 5 cm - 10 cm [15 pts]
☑ < 5 cm [5 pts]
☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: MAXIMUM POOL DEPTH (centimeters): 4

Pool Depth Max = 30: 5

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 (> 9' 7" - 4' 8") [20 pts]
☑ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: AVERAGE BANKFULL WIDTH (meters): 1.40

Bankfull Width Max=30: 15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L R	FLOODPLAIN QUALITY (Most Predominant per Bank) L R	
☑ ☑ Wide >10m	☐ ☐ Mature Forest, Wetland	☐ ☐ Conservation Tillage
☐ ☐ 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)* (Check *ONLY* one box):

☑ Stream Flowing
☐ Subsurface flow with isolated pools (Interstitial)
☐ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None ☑ 0.5 ☐ 1.0 ☐ 1.5 ☐ 2.0 ☐ 2.5 ☐ 3.0 ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Chester Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 30%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 12.60 Dissolved Oxygen (mg/l) _____ pH (S.U.) 7.66 Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts:

Stream 23 channel flow from outlet (Temp 12.2, pH 7.89); Stream 24 channel flow from headwall

BIOTIC EVALUATION

Performed? (Y/N): Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

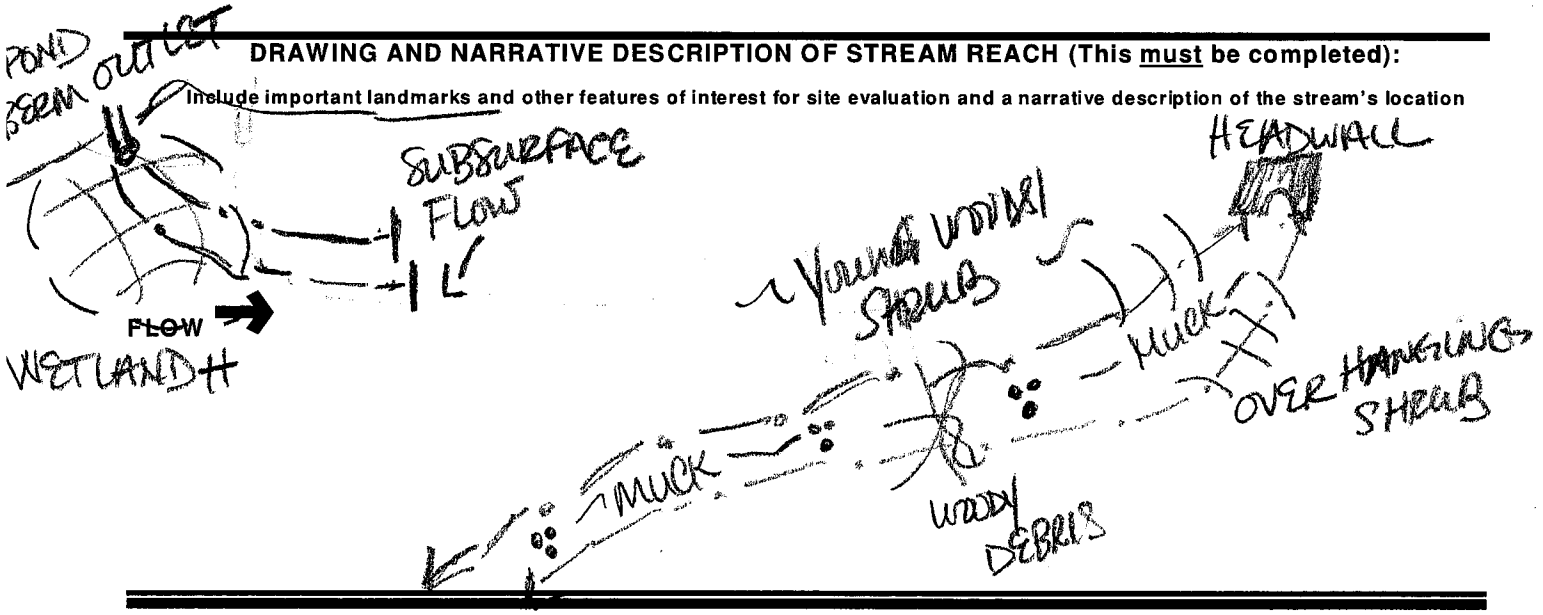
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 25

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County
Stream 25 & 26 — SITE NUMBER: — RIVER BASIN: 05040003 0202 — DRAINAGE AREA (mi²): 0.00
LENGTH OF STREAM REACH (ft): 200 — LAT.: 40.48592 — LONG.: -82.67118 — RIVER CODE: — RIVER MILE: 1146
DATE: 11/06/18 — SCORER: CVE — COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	5%
☐☐	BOULDER (>256 mm) [16 pts]	0%	☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☐☐	COBBLE (65-256 mm) [12 pts]	5%	☐☐	CLAY or HARDPAN [0 pt]	0%
☐☑	GRAVEL (2-64 mm) [9 pts]	20%	☑☐	MUCK [0 pts]	50%
☐☐	SAND (<2 mm) [6 pts]	5%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 5.00% (A) — Substrate Percentage Check (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 **TOTAL NUMBER OF SUBSTRATE TYPES:** 6

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☑ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 1

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 (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☑ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 0.80

HHEI Metric Points

Substrate Max = 40	15
A + B	
Pool Depth Max = 30	5
Bankfull Width Max=30	5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☐	☑	Wide >10m	☐	☑	Mature Forest, Wetland	☐	☐ Conservation Tillage
☑	☐	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)* (Check *ONLY* one box):

- ☐ Stream Flowing
- ☑ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☑ 0.5
- ☐ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Chester Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 40%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

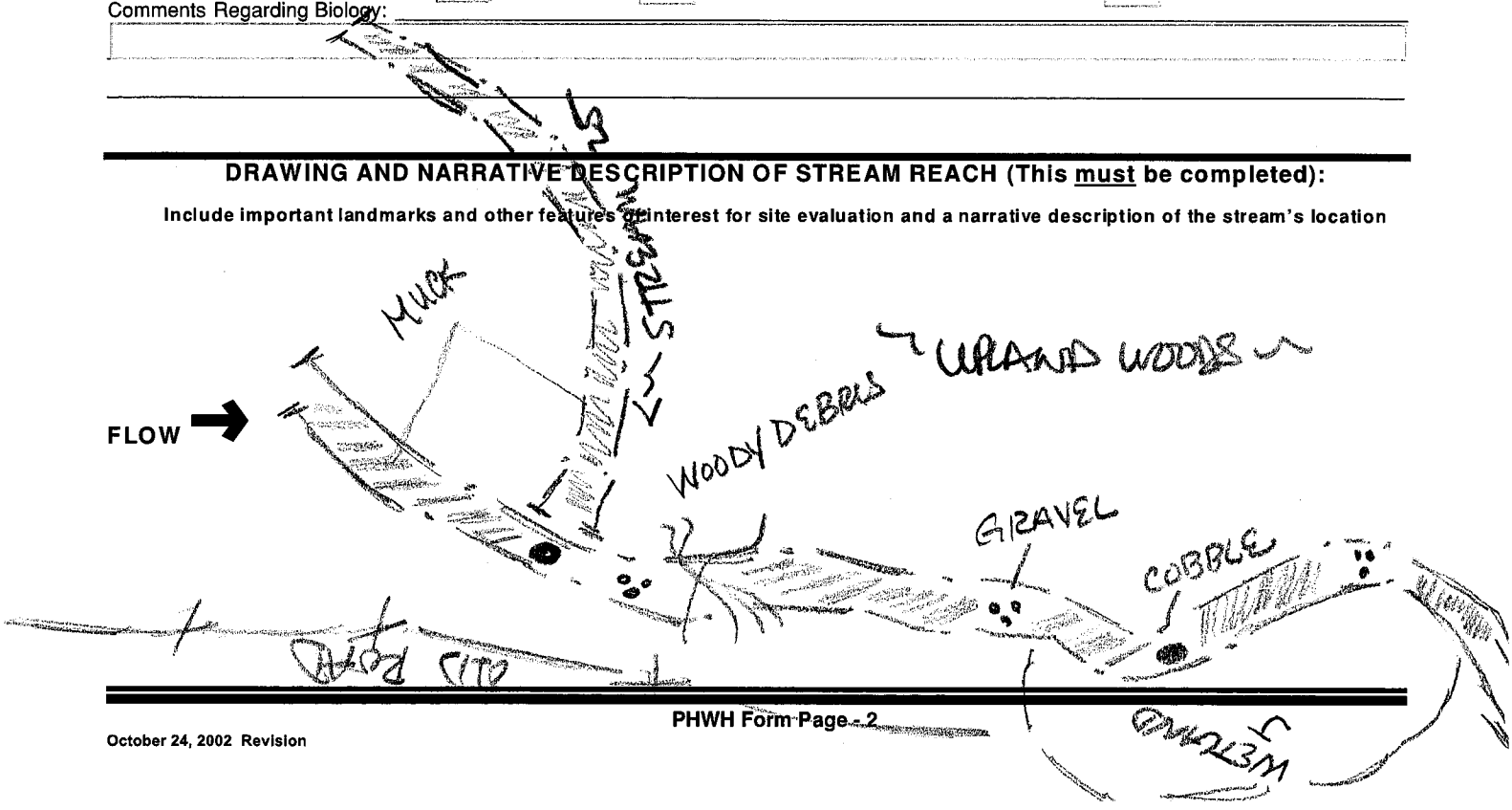
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 73

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County
Stream 27 — SITE NUMBER: — RIVER BASIN: 05040003 0202 — DRAINAGE AREA (mi²): 0.15
LENGTH OF STREAM REACH (ft): 200 — LAT.: 40.48841 — LONG.: -82.67042 — RIVER CODE: — RIVER MILE: 1146
DATE: 11/05/18 — SCORER: CVE — COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	5%
☐☐	BOULDER (>256 mm) [16 pts]	7%	☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	12%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☐☑	COBBLE (65-256 mm) [12 pts]	28%	☐☐	CLAY or HARDPAN [0 pt]	8%
☑☐	GRAVEL (2-64 mm) [9 pts]	32%	☐☐	MUCK [0 pts]	0%
☐☐	SAND (<2 mm) [6 pts]	8%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 35.00% (A) — Substrate Percentage Check — (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 **TOTAL NUMBER OF SUBSTRATE TYPES:** 7

HHEI Metric Points

Substrate Max = 40: 28

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☑ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 15

Pool Depth Max = 30: 25

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 (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 2.70

Bankfull Width Max=30: 20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☑	☑	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☐ 0.5
- ☐ 1.0
- ☐ 1.5
- ☑ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Chesterville NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Morrow Township / City: Franklin Twp & Chester Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 11/05/18 Quantity: 0.00

Photograph Information: included

Elevated Turbidity? (Y/N): N Canopy (% open): 20%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 13.70 Dissolved Oxygen (mg/l) _____ pH (S.U.) 8.06 Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

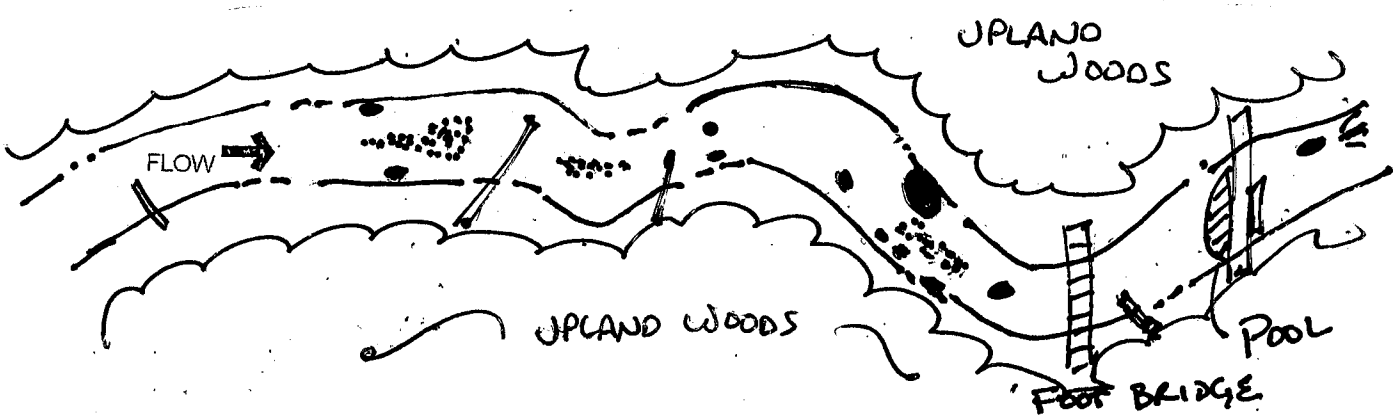
Fish Observed? (Y/N) Y Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 56

SITE NAME/LOCATION: 7130 CR 121 | Chester Twp, Morrow County
Stream 28 SITE NUMBER: | RIVER BASIN: 05040003 0202 | DRAINAGE AREA (mi²): 0.00
LENGTH OF STREAM REACH (ft): 200 | LAT.: 40.49381 | LONG.: -82.66980 | RIVER CODE: | RIVER MILE: 1182
DATE: 11/06/18 | SCORER: CVE | COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. **SUBSTRATE (Estimate percent of every type of substrate present.** Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	5%
☐☐	BOULDER (>256 mm) [16 pts]	12%	☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	10%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☐☐	COBBLE (65-256 mm) [12 pts]	18%	☐☐	CLAY or HARDPAN [0 pt]	0%
☑☐	GRAVEL (2-64 mm) [9 pts]	30%	☐☐	MUCK [0 pts]	0%
☐☑	SAND (<2 mm) [6 pts]	25%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 30.00% (A) | Substrate Percentage Check: | (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 **TOTAL NUMBER OF SUBSTRATE TYPES:** 6

HHEI Metric Points
Substrate Max = 40
21
A + B

2. **Maximum Pool Depth** ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐ > 30 centimeters [20 pts]
☐ > 22.5 - 30 cm [30 pts]
☐ > 10 - 22.5 cm [25 pts]
☑ > 5 cm - 10 cm [15 pts]
☐ < 5 cm [5 pts]
☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 5

Pool Depth Max = 30
15

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 (> 9' 7" - 4' 8") [20 pts]
☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 2.80

Bankfull Width Max=30
20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☑	☑	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

☑ Stream Flowing
☐ Subsurface flow with isolated pools (Interstitial)
☐ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None ☐ 0.5 ☐ 1.0 ☐ 1.5 ☐ 2.0 ☐ 2.5 ☑ 3.0 ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: **Chesterville** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Morrow** Township / City: **Chester Twp**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **11/05/18** Quantity: **0.00**

Photograph Information: **included**

Elevated Turbidity? (Y/N): **N** Canopy (% open): **20%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **Y** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

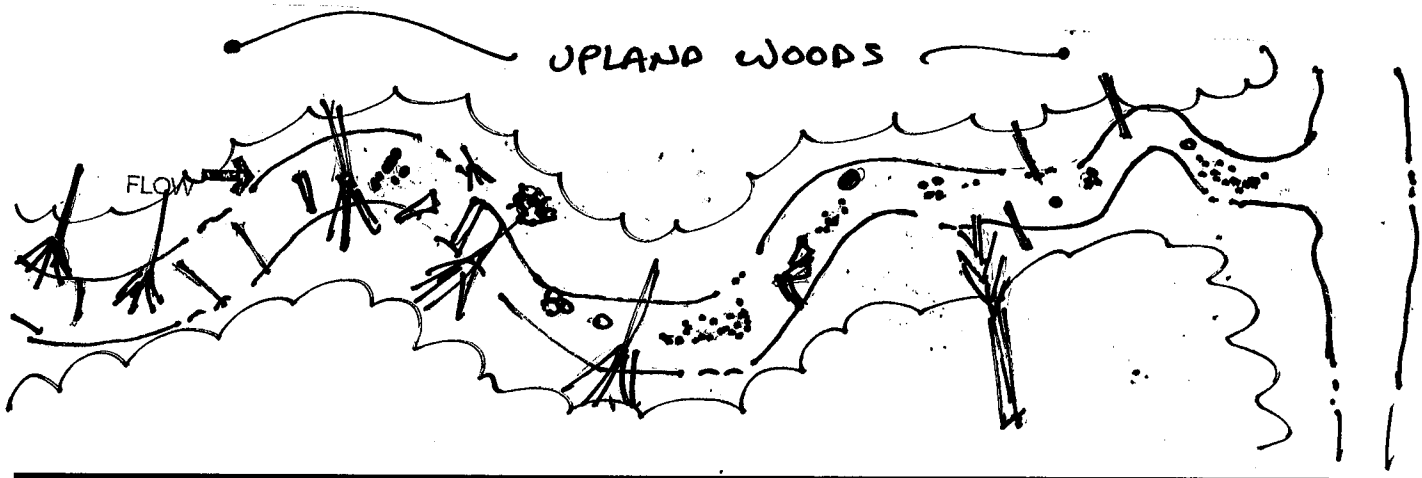
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 34

SITE NAME/LOCATION: 7130 CR 121 — Chester Twp, Morrow County

Stream 29 & Stream 30 SITE NUMBER: ____ RIVER BASIN: 05040003 0202 DRAINAGE AREA (mi²): 0.00

LENGTH OF STREAM REACH (ft): 200 LAT.: 40.49234 LONG.: -82.67201 RIVER CODE: ____ RIVER MILE: 1182

DATE: 11/05/18 SCORER: CVE COMMENTS: ____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	0%	☐☐	SILT [3 pt]	0%
☐☐	BOULDER (>256 mm) [16 pts]	5%	☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	10%
☐☐	BEDROCK [16 pt]	0%	☐☐	FINE DETRITUS [3 pts]	0%
☐☐	COBBLE (65-256 mm) [12 pts]	20%	☑☐	CLAY or HARDPAN [0 pt]	35%
☐☑	GRAVEL (2-64 mm) [9 pts]	30%	☐☐	MUCK [0 pts]	0%
☐☐	SAND (<2 mm) [6 pts]	0%	☐☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 25.00% (A) Substrate Percentage Check (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 **TOTAL NUMBER OF SUBSTRATE TYPES:** 5

HHEI Metric Points

Substrate Max = 40

14

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☑ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: ____ **MAXIMUM POOL DEPTH (centimeters):** 4

Pool Depth Max = 30

5

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 (> 9' 7" - 4' 8") [20 pts]
- ☑ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: ____ **AVERAGE BANKFULL WIDTH (meters):** 1.40

Bankfull Width Max=30

15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH L	R	(Per Bank)	FLOODPLAIN QUALITY L	R	(Most Predominant per Bank)	L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	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)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS: ____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☐ 0.5
- ☐ 1.0
- ☑ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: **Chesterville** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Morrow** Township / City: **Chester Twp**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **11/05/18** Quantity: **0.00**

Photograph Information: **included**

Elevated Turbidity? (Y/N): **N** Canopy (% open): **15%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) **12.20** Dissolved Oxygen (mg/l) _____ pH (S.U.) **7.97** Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

Stream 32 drains Wetland L, flows to Stream 33

BIOTIC EVALUATION

Performed? (Y/N): **Y** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

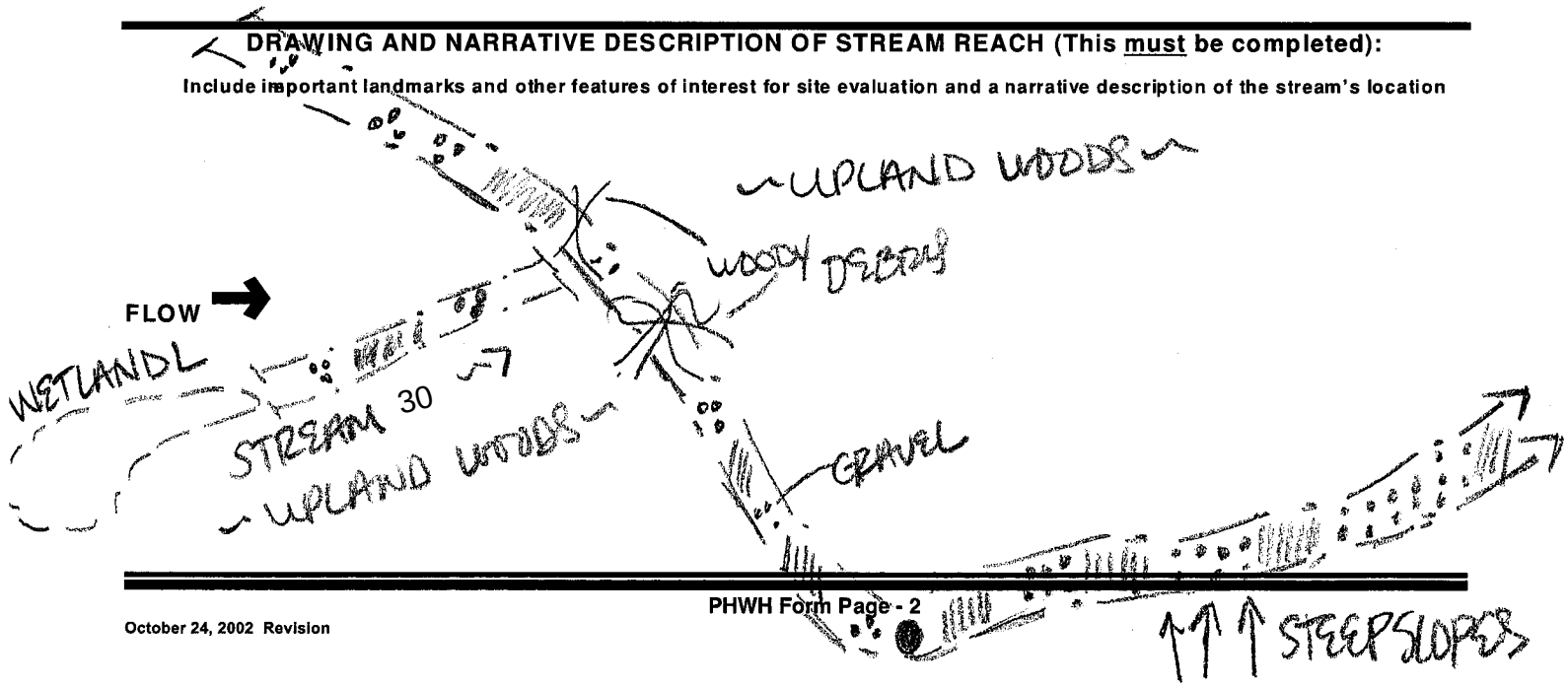
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



OHIO RAPID ASSESSMENT METHOD

(ORAM)

CHAGRIN VALLEY ENGINEERING, LTD.
Creative Engineers. Intelligent Solutions.

Contact Information		
	Applicant:	Agent:
Company Name:		
Address:		
City, State, Zip:		
Contact Person:		
Phone Number(s):		
E-Mail Address:		

Project Information		
Project Name: Morrow County Park District		
Street: Kunze Rd	**City/Township:** Chester	**County:** Morrow
Watershed (8-Digit HUC): 05040003 0202	**USGS Quad:** Chesterville	
NWI Map: (Chesterville Quad) Indicates presence of water resources		
Soil Survey: (Morrow County) Indicates presence of steep slopes		
Delineation Report/Mapping: Ecological Survey Report & Exhibits including: USGS, NWI, Soils, FEMA and Existing Conditions.		
Dates of Site Visit: November 2018		
USACE District: Huntington	Affirmed by Corps:	USACE Agent:

Wetland Information					
Wetland	**Acreage**	**Category (Final Score)**	**HGM Class**	**Vegetation Community Class**	**Lat/Long Coordinates**
A	0.18	2 (33)	Isolated Depression, open, mineral soils	Mixed Swamp Shrub, Mixed Emergent	040º 29’ 27.2682” -082º 39’ 49.8492”

Wetland A is located in a field which is transitioning to an old field/shrub community. This wetland drains to two (2) stream channels. The area surrounding Wetland A is managed due to the existing utility pole easement. No invasive species were observed within this wetland.

*Wetland sketch information including north arrow and relationship with other surface waters are included on the Existing Conditions Exhibit.

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 Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland A

#	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 mitigation site, conservation site, etc.	**X**	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both the natural and human-induced changes including, constrictions, caused by berms or dikes, points where 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 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 are present. These should not be used to establish scoring boundaries unless they coincide with areas where 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**

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

Wetland A

#	Question	Circle One	
#1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
#2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 Go to Question 3	NO Go to Question 3
#3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 Go to Question 4	NO Go to Question 4
#4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 Go to Question 5	NO Go to Question 5
#5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6	NO Go to Question 6
#6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 Go to Question 7	NO Go to Question 7
#7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 Go to Question 8a	NO Go to Question 8a

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

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	Rater(s):	Chagrin Valley Enginering	Date:	11/6/18

1	1	Wetland:	A, 0.18 acre
max 6 pts	subtotal		

33	2
Final Score	Category

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

5	6
max 14 pts	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
4	5 LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	3 MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

11	17
max 30 pts	subtotal

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

		None or none apparent (12)
	7	Recovered (7)
5	3	Recovering (3)
		Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike	X	road bed/RR track
	weir		dredging
	stormwater input	X	other pole easement

10	27
max 20 pts	subtotal

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

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

27
Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	**Rater(s):**	Chagrin Valley Enginering	**Date:**	11/6/18
		Wetland:	A, 0.18 acre		

27
Subtotal1st page

0 (max 10 pts) | 27 (subtotal)

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

6 (max 20 pts) | 33 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
3	1 Shrub
	Forest
	Mudflats
	Open water
	Other

6b. Horizontal (plan view) interspersion.

Select only one.

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

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

1	Vegetated hummocks/tussocks
0	Coarse woody debris > 15cm (6in)
1	0 Standing dead >25cm (10in) dbh
0	Amphibian breeding pools

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

33 **GRAND TOTAL (max 100 pts)** last revised 1 February 2001 jjm

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

Wetland A

Narrative Rating	Question 1. Critical Habitat	Yes (No)	If yes, Category 3
	Question 2. Threatened or Endangered Species	Yes (No)	If yes, Category 3
	Question 3. High Quality Natural Wetland	Yes (No)	If yes, Category 3
	Question 4. Significant Bird Habitat	Yes (No)	If yes, Category 3
	Question 5. Category 1 Wetlands	Yes (No)	If yes, Category 1
	Question 6. Bogs	Yes (No)	If yes, Category 3
	Question 7. Fens	Yes (No)	If yes, Category 3
	Question 8a. Old Growth Forest	Yes (No)	If yes, Category 3
	Question 8b. Mature Forested Wetland	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 9b. Lake Erie Wetlands-Restricted	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 9d. Lake Erie Wetlands-Unrestricted with native plants	Yes (No)	If yes, Category 3
	Question 9e. Lake Erie Wetlands-Unrestricted with invasive plants	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 10. Oak Openings	Yes (No)	If yes, Category 3
	Question 11. Relict Wet Prairies	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and Surrounding Land Use	5	
	Metric 3. Hydrology	11	
	Metric 4. Habitat	10	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant Communities, Interspersion, Microtopography	6	
	TOTAL SCORE	33	

Wetland A

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 *less* than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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© 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 (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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 wetlands should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54 © can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "*gray zone*" of a Category 1, 2, or 3 wetland?	(YES) Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and 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 non-rapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC Rule 3745-1-54 ©.
Does the wetland otherwise exhibit *moderate* OR *superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was under-categorized by this method. A written justification for re-categorization should be provided on Background Information Form.	(NO)	A wetland may be under-categorized 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 © (2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

FINAL CATEGORY:
Category 2

Contact Information		
	Applicant:	Agent:
Company Name:		
Address:		
City, State, Zip:		
Contact Person:		
Phone Number(s):		
E-Mail Address:		

Project Information		
Project Name: Morrow County Park District		
Street: Kunze Rd	**City/Township:** Chester	**County:** Morrow
Watershed (8-Digit HUC): 05040003 0202	**USGS Quad:** Chesterville	
NWI Map: (Chesterville Quad) Indicates presence of water resources		
Soil Survey: (Morrow County) Indicates presence of steep slopes		
Delineation Report/Mapping: Ecological Survey Report & Exhibits including: USGS, NWI, Soils, FEMA and Existing Conditions.		
Dates of Site Visit: November 2018		
USACE District: Huntington	Affirmed by Corps:	USACE Agent:

Wetland Information					
Wetland	**Acreage**	**Category (Final Score)**	**HGM Class**	**Vegetation Community Class**	**Lat/Long Coordinates**
B	0.03	3 (60)	Riverine, Mainstem, mineral soils	Mixed Swamp Forest, Mixed Emergent	040º 29’ 14.6076” - 082º 39’ 47.2608”

Wetland B is located along the left bank and floodplain of a perennial flowing stream. The surrounding plant community is forested. No invasive species were observed within this wetland.

*Wetland sketch information including north arrow and relationship with other surface waters are included on the Existing Conditions Exhibit.

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 Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland B

#	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 mitigation site, conservation site, etc.	**X**	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both the natural and human-induced changes including, constrictions, caused by berms or dikes, points where 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 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 are present. These should not be used to establish scoring boundaries unless they coincide with areas where 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**

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

Wetland B

#	Question	Circle One	
#1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
#2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 Go to Question 3	NO Go to Question 3
#3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 Go to Question 4	NO Go to Question 4
#4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 Go to Question 5	NO Go to Question 5
#5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6	NO Go to Question 6
#6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 Go to Question 7	NO Go to Question 7
#7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 Go to Question 8a	NO Go to Question 8a

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

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	Rater(s):	Chagrin Valley Enginering	Date:	11/5/18

0	0	Wetland:	B, 0.03 acre
max 6 pts	subtotal		

60	3
Final Score	Category

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

14	14
max 14 pts	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

23	37
max 30 pts	subtotal

Metric 3. Hydrology.

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

	High pH groundwater (5)
	Other groundwater (3)
6	1 Precipitation (1)
	Seasonal/Intermittent surface water (3)
	5 Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

ditch	point source (non stormwater)
tile	filling/grading
dike	road bed/RR track
weir	dredging
stormwater input	other

17	54
max 20 pts	subtotal

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

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

54
Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	**Rater(s):**	Chagrin Valley Enginering	**Date:**	11/5/18
		Wetland:	B, 0.03 acre		

54
Subtotal1st page

0 (max 10 pts) | 54 (subtotal)

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

6 (max 20 pts) | 60 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
3	Shrub
1	Forest
	Mudflats
	Open water
	Other

6b. Horizontal (plan view) interspersion.

Select only one.

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

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

0	Vegetated hummocks/tussocks
1	Coarse woody debris > 15cm (6in)
2	Standing dead >25cm (10in) dbh
0	Amphibian breeding pools
1	

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

60 **GRAND TOTAL (max 100 pts)** last revised 1 February 2001 jjm

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

Wetland B

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	
	Metric 2. Buffers and Surrounding Land Use	14	
	Metric 3. Hydrology	23	
	Metric 4. Habitat	17	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant Communities, Interspersion, Microtopography	6	
	TOTAL SCORE	60	

Wetland B

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 *less* than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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© 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 (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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 wetlands should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54 © can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "*gray zone*" of a Category 1, 2, or 3 wetland?	(YES) Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and 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 non-rapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC Rule 3745-1-54 ©.
Does the wetland otherwise exhibit *moderate* OR *superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was under-categorized by this method. A written justification for re-categorization should be provided on Background Information Form.	(NO)	A wetland may be under-categorized 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 © (2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

FINAL CATEGORY:
Category 3

Contact Information		
	Applicant:	Agent:
Company Name:		
Address:		
City, State, Zip:		
Contact Person:		
Phone Number(s):		
E-Mail Address:		

Project Information		
Project Name: Morrow County Park District		
Street: Kunze Rd	**City/Township:** Chester	**County:** Morrow
Watershed (8-Digit HUC): 05040003 0202	**USGS Quad:** Chesterville	
NWI Map: (Chesterville Quad) Indicates presence of water resources		
Soil Survey: (Morrow County) Indicates presence of steep slopes		
Delineation Report/Mapping: Ecological Survey Report & Exhibits including: USGS, NWI, Soils, FEMA and Existing Conditions.		
Dates of Site Visit: November 2018		
USACE District: Huntington	Affirmed by Corps:	USACE Agent:

Wetland Information					
Wetland	**Acreage**	**Category (Final Score)**	**HGM Class**	**Vegetation Community Class**	**Lat/Long Coordinates**
C	0.04	2 (54)	Riverine, Mainstem, mineral soils	Mixed Emergent	040º 29’ 10.3482” -082º 39’ 43.8978”

Wetland C is located at the confluence of two (2) perennial streams. Portions of this wetland were dredged in the past, possibly to divert flow from one of the stream channels. Wetland C has recovered from this past modification. The permanent inundation has created amphibian breeding habitat. No invasive species were observed within this wetland. The surrounding plant community consists of second growth woods.

*Wetland sketch information including north arrow and relationship with other surface waters are included on the Existing Conditions Exhibit.

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 Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland C

#	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 mitigation site, conservation site, etc.	**X**	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both the natural and human-induced changes including, constrictions, caused by berms or dikes, points where 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 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 are present. These should not be used to establish scoring boundaries unless they coincide with areas where 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**

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

Wetland C

#	Question	Circle One	
#1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
#2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 Go to Question 3	NO Go to Question 3
#3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 Go to Question 4	NO Go to Question 4
#4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 Go to Question 5	NO Go to Question 5
#5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6	NO Go to Question 6
#6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 Go to Question 7	NO Go to Question 7
#7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 Go to Question 8a	NO Go to Question 8a

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

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	Rater(s):	Chagrin Valley Enginering	Date:	11/5/18

0	0	Wetland:	C, 0.04 acre
max 6 pts	subtotal		

54	2
Final Score	Category

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

14	14
max 14 pts	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

20.5	34.5
max 30 pts	subtotal

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

4 (3a subtotal) | 1 (3b subtotal)

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

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

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

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

2 (3c subtotal) | 4 (3d subtotal)

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

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

9.5

Check all disturbances observed

	ditch		point source (non stormwater)
	tile		filling/grading
	dike		road bed/RR track
	weir	X	dredging
	stormwater input		other

16.5	51
max 20 pts	subtotal

Metric 4. Habitat alteration and development.

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

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

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

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

3.5 (4a subtotal) | 9 (4c subtotal)

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

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

Check all disturbances observed

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

51
Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	**Rater(s):**	Chagrin Valley Enginering	**Date:**	11/5/18
		Wetland:	C, 0.04 acre		

51
Subtotal1st page

0 (max 10 pts) | 51 (subtotal)

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

3 (max 20 pts) | 54 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

0	Aquatic bed
1	Emergent
1	Shrub
0	Forest
	Mudflats
	Open water
	Other

6b. Horizontal (plan view) interspersion.

Select only one.

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

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

0	Vegetated hummocks/tussocks
0	Coarse woody debris > 15cm (6in)
0	Standing dead >25cm (10in) dbh
1	Amphibian breeding pools
1	

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

54 **GRAND TOTAL (max 100 pts)** last revised 1 February 2001 jjm

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

Wetland C

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	
	Metric 2. Buffers and Surrounding Land Use	14	
	Metric 3. Hydrology	20.5	
	Metric 4. Habitat	16.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant Communities, Interspersion, Microtopography	3	
	TOTAL SCORE	54	

Wetland C

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 *less* than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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© 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 (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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 wetlands should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54 © can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "*gray zone*" of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and 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 non-rapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC Rule 3745-1-54 ©.
Does the wetland otherwise exhibit *moderate* OR *superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was under-categorized by this method. A written justification for re-categorization should be provided on Background Information Form.	(NO)	A wetland may be under-categorized 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 © (2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

FINAL CATEGORY:
Category 2

Contact Information		
	Applicant:	Agent:
Company Name:		
Address:		
City, State, Zip:		
Contact Person:		
Phone Number(s):		
E-Mail Address:		

Project Information		
Project Name: Morrow County Park District		
Street: Kunze Rd	**City/Township:** Chester	**County:** Morrow
Watershed (8-Digit HUC): 05040003 0202	**USGS Quad:** Chesterville	
NWI Map: (Chesterville Quad) Indicates presence of water resources		
Soil Survey: (Morrow County) Indicates presence of steep slopes		
Delineation Report/Mapping: Ecological Survey Report & Exhibits including: USGS, NWI, Soils, FEMA and Existing Conditions.		
Dates of Site Visit: November 2018		
USACE District: Huntington	Affirmed by Corps:	USACE Agent:

Wetland Information					
Wetland	**Acreage**	**Category (Final Score)**	**HGM Class**	**Vegetation Community Class**	**Lat/Long Coordinates**
D	0.21	2 (59)	Riverine, Mainstem, mineral soils	Mixed Swamp Forest, Mixed Emergent	040º 29’ 8.9952” -082º 39’ 43.5126”

Wetland D is located along the right bank and floodplain of a perennial stream. The surrounding plant community is second growth woods. No invasive species were observed in this wetland.

*Wetland sketch information including north arrow and relationship with other surface waters are included on the Existing Conditions Exhibit.

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 Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland D

#	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 mitigation site, conservation site, etc.	**X**	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both the natural and human-induced changes including, constrictions, caused by berms or dikes, points where 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 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 are present. These should not be used to establish scoring boundaries unless they coincide with areas where 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**

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

Wetland D

#	Question	Circle One	
#1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
#2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 Go to Question 3	NO Go to Question 3
#3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 Go to Question 4	NO Go to Question 4
#4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 Go to Question 5	NO Go to Question 5
#5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6	NO Go to Question 6
#6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 Go to Question 7	NO Go to Question 7
#7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 Go to Question 8a	NO Go to Question 8a

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

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	Rater(s):	Chagrin Valley Enginering	Date:	11/5/18

1	1	Wetland:	D, 0.21 acre
max 6 pts	subtotal		

59	2
Final Score	Category

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

14	15
max 14 pts	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

22	37
max 30 pts	subtotal

Metric 3. Hydrology.

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

	High pH groundwater (5)
	Other groundwater (3)
4	1 Precipitation (1)
	3 Seasonal/Intermittent surface water (3)
	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

	ditch		point source (non stormwater)
	tile		filling/grading
	dike		road bed/RR track
	weir		dredging
	stormwater input		other

17	54
max 20 pts	subtotal

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

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

54
Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	**Rater(s):**	Chagrin Valley Enginering	**Date:**	11/5/18
		Wetland:	D, 0.21 acre		

54
Subtotal1st page

0 (max 10 pts) | 54 (subtotal)

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

5 (max 20 pts) | 59 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
1	Emergent
1	Shrub
0	Forest
	Mudflats
	Open water
	Other

6b. Horizontal (plan view) interspersion.

Select only one.

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

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

1	Vegetated hummocks/tussocks
1	Coarse woody debris > 15cm (6in)
0	Standing dead >25cm (10in) dbh
1	Amphibian breeding pools
3	

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

59 **GRAND TOTAL (max 100 pts)** last revised 1 February 2001 jjm

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

Wetland D

Narrative Rating	Question 1. Critical Habitat	Yes (No)	If yes, Category 3
	Question 2. Threatened or Endangered Species	Yes (No)	If yes, Category 3
	Question 3. High Quality Natural Wetland	Yes (No)	If yes, Category 3
	Question 4. Significant Bird Habitat	Yes (No)	If yes, Category 3
	Question 5. Category 1 Wetlands	Yes (No)	If yes, Category 1
	Question 6. Bogs	Yes (No)	If yes, Category 3
	Question 7. Fens	Yes (No)	If yes, Category 3
	Question 8a. Old Growth Forest	Yes (No)	If yes, Category 3
	Question 8b. Mature Forested Wetland	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 9b. Lake Erie Wetlands-Restricted	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 9d. Lake Erie Wetlands-Unrestricted with native plants	Yes (No)	If yes, Category 3
	Question 9e. Lake Erie Wetlands-Unrestricted with invasive plants	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 10. Oak Openings	Yes (No)	If yes, Category 3
	Question 11. Relict Wet Prairies	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and Surrounding Land Use	14	
	Metric 3. Hydrology	22	
	Metric 4. Habitat	17	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant Communities, Interspersion, Microtopography	5	
	TOTAL SCORE	59	

Wetland D

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 *less* than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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© 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 (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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 wetlands should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54 © can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "*gray zone*" of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and 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 non-rapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC Rule 3745-1-54 ©.
Does the wetland otherwise exhibit *moderate* OR *superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was under-categorized by this method. A written justification for re-categorization should be provided on Background Information Form.	(NO)	A wetland may be under-categorized 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 © (2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

FINAL CATEGORY:
Category 2

Contact Information		
	Applicant:	Agent:
Company Name:		
Address:		
City, State, Zip:		
Contact Person:		
Phone Number(s):		
E-Mail Address:		

Project Information		
Project Name: Morrow County Park District		
Street: Kunze Rd	**City/Township:** Chester	**County:** Morrow
Watershed (8-Digit HUC): 05040003 0202	**USGS Quad:** Chesterville	
NWI Map: (Chesterville Quad) Indicates presence of water resources		
Soil Survey: (Morrow County) Indicates presence of steep slopes		
Delineation Report/Mapping: Ecological Survey Report & Exhibits including: USGS, NWI, Soils, FEMA and Existing Conditions.		
Dates of Site Visit: November 2018		
USACE District: Huntington	Affirmed by Corps:	USACE Agent:

Wetland Information					
Wetland	**Acreage**	**Category (Final Score)**	**HGM Class**	**Vegetation Community Class**	**Lat/Long Coordinates**
E	0.11	3 (60)	Riverine, Mainstem mineral soils	Mixed Swamp Shrub, Mixed Emergent	040º 29’ 8.1162” -082º 39’ 42.044”

Wetland E is dominated by native wet shrubs and emergent species. This wetland receives hydrology from multiple headwater streams. The surrounding upland woods provides wide buffers.

*Wetland sketch information including north arrow and relationship with other surface waters are included on the Existing Conditions Exhibit.

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 Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland E

#	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 mitigation site, conservation site, etc.	**X**	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both the natural and human-induced changes including, constrictions, caused by berms or dikes, points where 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 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 are present. These should not be used to establish scoring boundaries unless they coincide with areas where 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**

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

Wetland E

#	Question	Circle One	
#1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
#2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 Go to Question 3	NO Go to Question 3
#3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 Go to Question 4	NO Go to Question 4
#4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 Go to Question 5	NO Go to Question 5
#5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6	NO Go to Question 6
#6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 Go to Question 7	NO Go to Question 7
#7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 Go to Question 8a	NO Go to Question 8a

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

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	Rater(s):	Chagrin Valley Enginering	Date:	11/5/18

1	1	Wetland:	E, 0.11 acre
max 6 pts	subtotal		

60	3
Final Score	Category

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

14	15
max 14 pts	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

22	37
max 30 pts	subtotal

Metric 3. Hydrology.

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

	High pH groundwater (5)
	Other groundwater (3)
4	1 Precipitation (1)
	3 Seasonal/Intermittent surface water (3)
	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

	ditch		point source (non stormwater)
	tile		filling/grading
	dike		road bed/RR track
	weir		dredging
	stormwater input		other

17	54
max 20 pts	subtotal

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

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

54
Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	**Rater(s):**	Chagrin Valley Enginering	**Date:**	11/5/18
		Wetland:	E, 0.11 acre		

54
Subtotal1st page

0 (max 10 pts) | 54 (subtotal)

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

6 (max 20 pts) | 60 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
0	Emergent
1	Shrub
	Forest
	Mudflats
	Open water
	Other

6b. Horizontal (plan view) interspersion.

Select only one.

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

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

1	Vegetated hummocks/tussocks
1	Coarse woody debris > 15cm (6in)
1	Standing dead >25cm (10in) dbh
1	Amphibian breeding pools
4	

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

60 **GRAND TOTAL (max 100 pts)** last revised 1 February 2001 jjm

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

Wetland E

Narrative Rating	Question 1. Critical Habitat	Yes (No)	If yes, Category 3
	Question 2. Threatened or Endangered Species	Yes (No)	If yes, Category 3
	Question 3. High Quality Natural Wetland	Yes (No)	If yes, Category 3
	Question 4. Significant Bird Habitat	Yes (No)	If yes, Category 3
	Question 5. Category 1 Wetlands	Yes (No)	If yes, Category 1
	Question 6. Bogs	Yes (No)	If yes, Category 3
	Question 7. Fens	Yes (No)	If yes, Category 3
	Question 8a. Old Growth Forest	Yes (No)	If yes, Category 3
	Question 8b. Mature Forested Wetland	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 9b. Lake Erie Wetlands-Restricted	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 9d. Lake Erie Wetlands-Unrestricted with native plants	Yes (No)	If yes, Category 3
	Question 9e. Lake Erie Wetlands-Unrestricted with invasive plants	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 10. Oak Openings	Yes (No)	If yes, Category 3
	Question 11. Relict Wet Prairies	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and Surrounding Land Use	14	
	Metric 3. Hydrology	22	
	Metric 4. Habitat	17	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant Communities, Interspersion, Microtopography	6	
	TOTAL SCORE	60	

Wetland E

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 *less* than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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© 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 (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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 wetlands should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54 © can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "*gray zone*" of a Category 1, 2, or 3 wetland?	(YES) Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and 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 non-rapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC Rule 3745-1-54 ©.
Does the wetland otherwise exhibit *moderate* OR *superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was under-categorized by this method. A written justification for re-categorization should be provided on Background Information Form.	(NO)	A wetland may be under-categorized 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 © (2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

FINAL CATEGORY:
Category 3

Contact Information		
	Applicant:	Agent:
Company Name:		
Address:		
City, State, Zip:		
Contact Person:		
Phone Number(s):		
E-Mail Address:		

Project Information		
Project Name: Morrow County Park District		
Street: Kunze Rd	**City/Township:** Chester	**County:** Morrow
Watershed (8-Digit HUC): 05040003 0202	**USGS Quad:** Chesterville	
NWI Map: (Chesterville Quad) Indicates presence of water resources		
Soil Survey: (Morrow County) Indicates presence of steep slopes		
Delineation Report/Mapping: Ecological Survey Report & Exhibits including: USGS, NWI, Soils, FEMA and Existing Conditions.		
Dates of Site Visit: November 2018		
USACE District: Huntington	Affirmed by Corps:	USACE Agent:

Wetland Information					
Wetland	**Acreage**	**Category (Final Score)**	**HGM Class**	**Vegetation Community Class**	**Lat/Long Coordinates**
F	0.24	2 (48)	Isolated Depression, open, mineral soils	Mixed Swamp Forest, Mixed Swamp Shrub, Mixed Emergent	040º 29’ 13.11” -082º 39’ 32.1588”

Wetland F is located midslope in a young woods/ shrub community. This wetland drains to an intermittent stream. No invasive species were observed in Wetland F.

*Wetland sketch information including north arrow and relationship with other surface waters are included on the Existing Conditions Exhibit.

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 Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland F

#	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 mitigation site, conservation site, etc.	**X**	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both the natural and human-induced changes including, constrictions, caused by berms or dikes, points where 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 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 are present. These should not be used to establish scoring boundaries unless they coincide with areas where 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**

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

Wetland F

#	Question	Circle One	
#1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
#2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 Go to Question 3	NO Go to Question 3
#3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 Go to Question 4	NO Go to Question 4
#4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 Go to Question 5	NO Go to Question 5
#5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6	NO Go to Question 6
#6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 Go to Question 7	NO Go to Question 7
#7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 Go to Question 8a	NO Go to Question 8a

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

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	Rater(s):	Chagrin Valley Enginering	Date:	11/5/18

1	1	Wetland:	F, 0.24 acre
max 6 pts	subtotal		

48	2
Final Score	Category

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

8	9
max 14 pts	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
4	5 LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	3 MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

18	27
max 30 pts	subtotal

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

	ditch		point source (non stormwater)
	tile		filling/grading
	dike		road bed/RR track
	weir		dredging
	stormwater input		other

17	44
max 20 pts	subtotal

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

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

44
Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	**Rater(s):**	Chagrin Valley Enginering	**Date:**	11/5/18
		Wetland:	F, 0.24 acre		

44
Subtotal1st page

0 (max 10 pts) | 44 (subtotal)

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

4 (max 20 pts) | 48 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
0	Emergent
0	Shrub
1	Forest
	Mudflats
	Open water
	Other

6b. Horizontal (plan view) interspersion.

Select only one.

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

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

0	Vegetated hummocks/tussocks
1	Coarse woody debris > 15cm (6in)
1	Standing dead >25cm (10in) dbh
0	Amphibian breeding pools
2	

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

48 **GRAND TOTAL (max 100 pts)** last revised 1 February 2001 jjm

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

Wetland F

Narrative Rating	Question 1. Critical Habitat	Yes (No)	If yes, Category 3
	Question 2. Threatened or Endangered Species	Yes (No)	If yes, Category 3
	Question 3. High Quality Natural Wetland	Yes (No)	If yes, Category 3
	Question 4. Significant Bird Habitat	Yes (No)	If yes, Category 3
	Question 5. Category 1 Wetlands	Yes (No)	If yes, Category 1
	Question 6. Bogs	Yes (No)	If yes, Category 3
	Question 7. Fens	Yes (No)	If yes, Category 3
	Question 8a. Old Growth Forest	Yes (No)	If yes, Category 3
	Question 8b. Mature Forested Wetland	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 9b. Lake Erie Wetlands-Restricted	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 9d. Lake Erie Wetlands-Unrestricted with native plants	Yes (No)	If yes, Category 3
	Question 9e. Lake Erie Wetlands-Unrestricted with invasive plants	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 10. Oak Openings	Yes (No)	If yes, Category 3
	Question 11. Relict Wet Prairies	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and Surrounding Land Use	8	
	Metric 3. Hydrology	18	
	Metric 4. Habitat	17	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant Communities, Interspersion, Microtopography	4	
	TOTAL SCORE	48	

Wetland F

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 *less* than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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© 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 (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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 wetlands should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54 © can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "*gray zone*" of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and 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 non-rapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC Rule 3745-1-54 ©.
Does the wetland otherwise exhibit *moderate* OR *superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was under-categorized by this method. A written justification for re-categorization should be provided on Background Information Form.	(NO)	A wetland may be under-categorized 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 © (2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

FINAL CATEGORY:
Category 2

Contact Information		
	Applicant:	Agent:
Company Name:		
Address:		
City, State, Zip:		
Contact Person:		
Phone Number(s):		
E-Mail Address:		

Project Information		
Project Name: Morrow County Park District		
Street: Kunze Rd	**City/Township:** Chester	**County:** Morrow
Watershed (8-Digit HUC): 05040003 0202	**USGS Quad:** Chesterville	
NWI Map: (Chesterville Quad) Indicates presence of water resources		
Soil Survey: (Morrow County) Indicates presence of steep slopes		
Delineation Report/Mapping: Ecological Survey Report & Exhibits including: USGS, NWI, Soils, FEMA and Existing Conditions.		
Dates of Site Visit: November 2018		
USACE District: Huntington	Affirmed by Corps:	USACE Agent:

Wetland Information					
Wetland	**Acreage**	**Category (Final Score)**	**HGM Class**	**Vegetation Community Class**	**Lat/Long Coordinates**
G	0.35	2 (55)	Isolated Depression, closed, mineral soils	Mixed Swamp Forest, Mixed Shrub, Mixed Emergent	040º 29’ 12.7782” -082º 39’ 54.1656”

Wetland G is located midslope and precipitation is the source of hydrology for this wetland. No modifications to habitat or hydrology were observed.

*Wetland sketch information including north arrow and relationship with other surface waters are included on the Existing Conditions Exhibit.

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 Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland G

#	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 mitigation site, conservation site, etc.	**X**	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both the natural and human-induced changes including, constrictions, caused by berms or dikes, points where 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 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 are present. These should not be used to establish scoring boundaries unless they coincide with areas where 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**

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

Wetland G

#	Question	Circle One	
#1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
#2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 Go to Question 3	NO Go to Question 3
#3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 Go to Question 4	NO Go to Question 4
#4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 Go to Question 5	NO Go to Question 5
#5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6	NO Go to Question 6
#6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 Go to Question 7	NO Go to Question 7
#7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 Go to Question 8a	NO Go to Question 8a

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

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	Rater(s):	Chagrin Valley Enginering	Date:	11/6/18

2	2	Wetland:	G, 0.35 acre
max 6 pts	subtotal		

55	2
Final Score	Category

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

14	16
max 14 pts	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

18	34
max 30 pts	subtotal

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

ditch	point source (non stormwater)
tile	filling/grading
dike	road bed/RR track
weir	dredging
stormwater input	other

17	51
max 20 pts	subtotal

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

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

51
Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	**Rater(s):**	Chagrin Valley Enginering	**Date:**	11/6/18
		Wetland:	G, 0.35 acre		

51
Subtotal1st page

0 (max 10 pts) | 51 (subtotal)

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

4 (max 20 pts) | 55 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
0	Emergent
1	Shrub
0	Forest
	Mudflats
	Open water
	Other

6b. Horizontal (plan view) interspersion.

Select only one.

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

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

0	Vegetated hummocks/tussocks
1	Coarse woody debris > 15cm (6in)
2	Standing dead >25cm (10in) dbh
0	Amphibian breeding pools

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

55 **GRAND TOTAL (max 100 pts)** last revised 1 February 2001 jjm

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

Wetland G

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	
	Metric 2. Buffers and Surrounding Land Use	14	
	Metric 3. Hydrology	18	
	Metric 4. Habitat	17	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant Communities, Interspersion, Microtopography	4	
	TOTAL SCORE	55	

Wetland G

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 *less* than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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© 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 (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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 wetlands should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54 © can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "*gray zone*" of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and 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 non-rapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC Rule 3745-1-54 ©.
Does the wetland otherwise exhibit *moderate* OR *superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was under-categorized by this method. A written justification for re-categorization should be provided on Background Information Form.	(NO)	A wetland may be under-categorized 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 © (2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

FINAL CATEGORY:
Category 2

Contact Information		
	Applicant:	Agent:
Company Name:		
Address:		
City, State, Zip:		
Contact Person:		
Phone Number(s):		
E-Mail Address:		

Project Information		
Project Name: Morrow County Park District		
Street: Kunze Rd	**City/Township:** Chester	**County:** Morrow
Watershed (8-Digit HUC): 05040003 0202	**USGS Quad:** Chesterville	
NWI Map: (Chesterville Quad) Indicates presence of water resources		
Soil Survey: (Morrow County) Indicates presence of steep slopes		
Delineation Report/Mapping: Ecological Survey Report & Exhibits including: USGS, NWI, Soils, FEMA and Existing Conditions.		
Dates of Site Visit: November 2018		
USACE District: Huntington	Affirmed by Corps:	USACE Agent:

Wetland Information					
Wetland	**Acreage**	**Category (Final Score)**	**HGM Class**	**Vegetation Community Class**	**Lat/Long Coordinates**
H	0.03	2 (47.5)	Riparian Depression, headwater, mineral soils	Mixed Swamp Forest, Mixed Emergent	040º 29’ 13.922” -082º 40’ 3.2448”

Wetland H receives hydrology from the existing dam outlet and has recovered from past modifications. The surrounding plant community is young woods/shrub. No invasive species were observed in Wetland H.

*Wetland sketch information including north arrow and relationship with other surface waters are included on the Existing Conditions Exhibit.

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 Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland H

#	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 mitigation site, conservation site, etc.	**X**	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both the natural and human-induced changes including, constrictions, caused by berms or dikes, points where 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 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 are present. These should not be used to establish scoring boundaries unless they coincide with areas where 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**

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

Wetland H

#	Question	Circle One	
#1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
#2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 Go to Question 3	NO Go to Question 3
#3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 Go to Question 4	NO Go to Question 4
#4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 Go to Question 5	NO Go to Question 5
#5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6	NO Go to Question 6
#6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 Go to Question 7	NO Go to Question 7
#7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 Go to Question 8a	NO Go to Question 8a

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

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	Rater(s):	Chagrin Valley Enginering	Date:	11/6/18

0	0	Wetland:	H, 0.03 acre
max 6 pts	subtotal		

47.5	2
Final Score	Category

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

12	12
max 14 pts	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

17	29
max 30 pts	subtotal

Metric 3. Hydrology.

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

	High pH groundwater (5)
	Other groundwater (3)
6	1 Precipitation (1)
	Seasonal/Intermittent surface water (3)
	5 Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

	ditch	X	point source (non stormwater)
	tile		filling/grading
	dike		road bed/RR track
X	weir		dredging
	stormwater input		other

16.5	45.5
max 20 pts	subtotal

Metric 4. Habitat alteration and development.

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

4	None or none apparent (4)
3.5	3 Recovered (3)
	Recovering (2)
	Recent or no recovery (1)

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

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

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

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

Check all disturbances observed

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

45.5

Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	**Rater(s):**	Chagrin Valley Enginering	**Date:**	11/6/18
		Wetland:	H, 0.03 acre		

45.5
Subtotal1st page

0 (max 10 pts) | 45.5 (subtotal)

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

2 (max 20 pts) | 47.5 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
1	Emergent
1	Shrub
0	Forest
	Mudflats
	Open water
	Other

6b. Horizontal (plan view) interspersion.

Select only one.

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

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

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

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

47.5 **GRAND TOTAL (max 100 pts)** last revised 1 February 2001 jjm

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

Wetland H

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	
	Metric 2. Buffers and Surrounding Land Use	12	
	Metric 3. Hydrology	17	
	Metric 4. Habitat	16.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant Communities, Interspersion, Microtopography	2	
	TOTAL SCORE	47.5	

Wetland H

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 *less* than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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© 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 (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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 wetlands should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54 © can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "*gray zone*" of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and 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 non-rapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC Rule 3745-1-54 ©.
Does the wetland otherwise exhibit *moderate* OR *superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was under-categorized by this method. A written justification for re-categorization should be provided on Background Information Form.	(NO)	A wetland may be under-categorized 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 © (2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

FINAL CATEGORY:
Category 2

Contact Information		
	Applicant:	Agent:
Company Name:		
Address:		
City, State, Zip:		
Contact Person:		
Phone Number(s):		
E-Mail Address:		

Project Information		
Project Name: Morrow County Park District		
Street: Kunze Rd	**City/Township:** Chester	**County:** Morrow
Watershed (8-Digit HUC): 05040003 0202	**USGS Quad:** Chesterville	
NWI Map: (Chesterville Quad) Indicates presence of water resources		
Soil Survey: (Morrow County) Indicates presence of steep slopes		
Delineation Report/Mapping: Ecological Survey Report & Exhibits including: USGS, NWI, Soils, FEMA and Existing Conditions.		
Dates of Site Visit: November 2018		
USACE District: Huntington	Affirmed by Corps:	USACE Agent:

Wetland Information					
Wetland	**Acreage**	**Category (Final Score)**	**HGM Class**	**Vegetation Community Class**	**Lat/Long Coordinates**
I	0.18	2 (58)	Riparian Depression, headwater, mineral soils	Mixed Swamp Forest, Mixed Emergent	040º 29’ 11.0142” -082º 40’ 4.728”

Wetland I is located along and within the channel of a perennial stream channel, downstream of the existing dam outlet. The surrounding plant community is second growth woods. No invasive species were observed in Wetland I.

*Wetland sketch information including north arrow and relationship with other surface waters are included on the Existing Conditions Exhibit.

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 Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland I

#	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 mitigation site, conservation site, etc.	**X**	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both the natural and human-induced changes including, constrictions, caused by berms or dikes, points where 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 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 are present. These should not be used to establish scoring boundaries unless they coincide with areas where 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**

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

Wetland I

#	Question	Circle One	
#1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
#2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 Go to Question 3	NO Go to Question 3
#3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 Go to Question 4	NO Go to Question 4
#4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 Go to Question 5	NO Go to Question 5
#5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6	NO Go to Question 6
#6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 Go to Question 7	NO Go to Question 7
#7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 Go to Question 8a	NO Go to Question 8a

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

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	Rater(s):	Chagrin Valley Enginering	Date:	11/6/18

1	1	Wetland:	I, 0.18 acre
max 6 pts	subtotal		

58	2
Final Score	Category

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

14	15
max 14 pts	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

23	38
max 30 pts	subtotal

Metric 3. Hydrology.

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

	High pH groundwater (5)
	Other groundwater (3)
6	1 Precipitation (1)
	Seasonal/Intermittent surface water (3)
	5 Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

ditch	point source (non stormwater)
tile	filling/grading
dike	road bed/RR track
weir	dredging
stormwater input	other

17	55
max 20 pts	subtotal

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

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

55
Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	**Rater(s):**	Chagrin Valley Enginering	**Date:**	11/6/18
		Wetland:	I, 0.18 acre		

55
Subtotal1st page

0 (max 10 pts) | 55 (subtotal)

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

3 (max 20 pts) | 58 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
0	Emergent
1	Shrub
1	Forest
	Mudflats
	Open water
	Other

6b. Horizontal (plan view) interspersion.

Select only one.

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

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

0	Vegetated hummocks/tussocks
1	Coarse woody debris > 15cm (6in)
1	0 Standing dead >25cm (10in) dbh
0	Amphibian breeding pools

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

58 **GRAND TOTAL (max 100 pts)** last revised 1 February 2001 jjm

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

Wetland I

Narrative Rating	Question 1. Critical Habitat	Yes (No)	If yes, Category 3
	Question 2. Threatened or Endangered Species	Yes (No)	If yes, Category 3
	Question 3. High Quality Natural Wetland	Yes (No)	If yes, Category 3
	Question 4. Significant Bird Habitat	Yes (No)	If yes, Category 3
	Question 5. Category 1 Wetlands	Yes (No)	If yes, Category 1
	Question 6. Bogs	Yes (No)	If yes, Category 3
	Question 7. Fens	Yes (No)	If yes, Category 3
	Question 8a. Old Growth Forest	Yes (No)	If yes, Category 3
	Question 8b. Mature Forested Wetland	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 9b. Lake Erie Wetlands-Restricted	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 9d. Lake Erie Wetlands-Unrestricted with native plants	Yes (No)	If yes, Category 3
	Question 9e. Lake Erie Wetlands-Unrestricted with invasive plants	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
	Question 10. Oak Openings	Yes (No)	If yes, Category 3
	Question 11. Relict Wet Prairies	Yes (No)	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and Surrounding Land Use	14	
	Metric 3. Hydrology	23	
	Metric 4. Habitat	17	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant Communities, Interspersion, Microtopography	3	
	TOTAL SCORE	58	

Wetland I

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 *less* than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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© 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 (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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 wetlands should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54 © can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "*gray zone*" of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and 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 non-rapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC Rule 3745-1-54 ©.
Does the wetland otherwise exhibit *moderate* OR *superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was under-categorized by this method. A written justification for re-categorization should be provided on Background Information Form.	(NO)	A wetland may be under-categorized 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 © (2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

FINAL CATEGORY:
Category 2

Contact Information		
	Applicant:	Agent:
Company Name:		
Address:		
City, State, Zip:		
Contact Person:		
Phone Number(s):		
E-Mail Address:		

Project Information		
Project Name: Morrow County Park District		
Street: Kunze Rd	**City/Township:** Chester	**County:** Morrow
Watershed (8-Digit HUC): 05040003 0202	**USGS Quad:** Chesterville	
NWI Map: (Chesterville Quad) Indicates presence of water resources		
Soil Survey: (Morrow County) Indicates presence of steep slopes		
Delineation Report/Mapping: Ecological Survey Report & Exhibits including: USGS, NWI, Soils, FEMA and Existing Conditions.		
Dates of Site Visit: November 2018		
USACE District: Huntington	Affirmed by Corps:	USACE Agent:

Wetland Information					
Wetland	**Acreage**	**Category (Final Score)**	**HGM Class**	**Vegetation Community Class**	**Lat/Long Coordinates**
J	0.05	2 (39.5)	Riparian Depression, headwater, mineral soils	Mixed Emergent	040º 29’ 8.916” -082º 40’ 16.4964”

Wetland J is a small wetland complex in a riparian corridor. A portion of this complex lies in the floodplain of a perennial stream (Stream 27) and may be part of an old channel. The remainder of the wetland in this complex is along a depression midslope that drains into an intermittent stream (Stream 26) which flows into Stream 27. A sparse coverage of the invasive plant *Phalaris arundinacea* was observed in this complex.

*Wetland sketch information including north arrow and relationship with other surface waters are included on the Existing Conditions Exhibit.

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 Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland J

#	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 mitigation site, conservation site, etc.	**X**	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both the natural and human-induced changes including, constrictions, caused by berms or dikes, points where 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 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 are present. These should not be used to establish scoring boundaries unless they coincide with areas where 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**	

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

Wetland J

#	Question	Circle One	
#1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
#2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 Go to Question 3	NO Go to Question 3
#3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 Go to Question 4	NO Go to Question 4
#4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 Go to Question 5	NO Go to Question 5
#5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6	NO Go to Question 6
#6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 Go to Question 7	NO Go to Question 7
#7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 Go to Question 8a	NO Go to Question 8a

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

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	Rater(s):	Chagrin Valley Enginering	Date:	11/6/18

0	0	Wetland:	J, 0.05 acre
max 6 pts	subtotal		

39.5	Mod 2
Final Score	Category

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

9	9
max 14 pts	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

14.5	23.5
max 30 pts	subtotal

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

	ditch		point source (non stormwater)
	tile		filling/grading
	dike	X	road bed/RR track
	weir		dredging
	stormwater input		other

15	38.5
max 20 pts	subtotal

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

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

38.5
Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	**Rater(s):**	Chagrin Valley Enginering	**Date:**	11/6/18
		Wetland:	J, 0.05 acre		

38.5
Subtotal1st page

0 (max 10 pts) | 38.5 (subtotal)

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

1 (max 20 pts) | 39.5 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
1	Emergent
1	Shrub
	Forest
	Mudflats
	Open water
	Other

6b. Horizontal (plan view) interspersion.

Select only one.

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

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

1	Vegetated hummocks/tussocks
0	Coarse woody debris > 15cm (6in)
0	Standing dead >25cm (10in) dbh
0	Amphibian breeding pools
1	

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

39.5 **GRAND TOTAL (max 100 pts)** last revised 1 February 2001 jjm

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

Wetland J

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	
	Metric 2. Buffers and Surrounding Land Use	9	
	Metric 3. Hydrology	14.5	
	Metric 4. Habitat	15	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant Communities, Interspersion, Microtopography	1	
	TOTAL SCORE	39.5	

Wetland J

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 *less* than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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© 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 (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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 wetlands should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54 © can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "*gray zone*" of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and 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 non-rapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC Rule 3745-1-54 ©.
Does the wetland otherwise exhibit *moderate* OR *superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was under-categorized by this method. A written justification for re-categorization should be provided on Background Information Form.	(NO)	A wetland may be under-categorized 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 © (2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

FINAL CATEGORY:
Category 2

Contact Information		
	Applicant:	Agent:
Company Name:		
Address:		
City, State, Zip:		
Contact Person:		
Phone Number(s):		
E-Mail Address:		

Project Information		
Project Name: Morrow County Park District		
Street: Kunze Rd	**City/Township:** Chester	**County:** Morrow
Watershed (8-Digit HUC): 05040003 0202	**USGS Quad:** Chesterville	
NWI Map: (Chesterville Quad) Indicates presence of water resources		
Soil Survey: (Morrow County) Indicates presence of steep slopes		
Delineation Report/Mapping: Ecological Survey Report & Exhibits including: USGS, NWI, Soils, FEMA and Existing Conditions.		
Dates of Site Visit: November 2018		
USACE District: Huntington	Affirmed by Corps:	USACE Agent:

Wetland Information					
Wetland	**Acreage**	**Category (Final Score)**	**HGM Class**	**Vegetation Community Class**	**Lat/Long Coordinates**
K	0.35	2 (54.5)	Impoundment, human, mineral soils	Mixed Swamp Forest, Mixed Shrub, Mixed Emergent	040º 29’ 12.9186” -082º 39’ 59.3634”

Wetland K is a fringing along the south/southeast boundary of an existing man-made pond. This wetland has recovered from past disturbances to hydrology and habitat. No invasive species were observed in this wetland.

*Wetland sketch information including north arrow and relationship with other surface waters are included on the Existing Conditions Exhibit.

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 Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland K

#	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 mitigation site, conservation site, etc.	**X**	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both the natural and human-induced changes including, constrictions, caused by berms or dikes, points where 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 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 are present. These should not be used to establish scoring boundaries unless they coincide with areas where 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**

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

Wetland K

#	Question	Circle One	
#1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
#2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 Go to Question 3	NO Go to Question 3
#3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 Go to Question 4	NO Go to Question 4
#4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 Go to Question 5	NO Go to Question 5
#5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6	NO Go to Question 6
#6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 Go to Question 7	NO Go to Question 7
#7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 Go to Question 8a	NO Go to Question 8a

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

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	Rater(s):	Chagrin Valley Enginering	Date:	11/6/18

3	3	Wetland:	K, 0.35 acre
max 6 pts	subtotal		

54.5	2
Final Score	Category

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

12	15
max 14 pts	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

20.5	35.5
max 30 pts	subtotal

Metric 3. Hydrology.

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

	High pH groundwater (5)
	Other groundwater (3)
6	1 Precipitation (1)
	Seasonal/Intermittent surface water (3)
	5 Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

	ditch		point source (non stormwater)
	tile		filling/grading
	dike		road bed/RR track
	weir	X	dredging
	stormwater input		other

16	51.5
max 20 pts	subtotal

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

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

51.5
Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	7130 CR 121	**Rater(s):**	Chagrin Valley Enginering	**Date:**	11/6/18
		Wetland:	K, 0.35 acre		

51.5
Subtotal1st page

0 (max 10 pts) | 51.5 (subtotal)

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

3 (max 20 pts) | 54.5 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
1	Emergent
0	Shrub
0	Forest
	Mudflats
	Open water
	Other

6b. Horizontal (plan view) interspersion.

Select only one.

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

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

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

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

54.5 **GRAND TOTAL (max 100 pts)** last revised 1 February 2001 jjm

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

Wetland K

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	3	
	Metric 2. Buffers and Surrounding Land Use	12	
	Metric 3. Hydrology	20.5	
	Metric 4. Habitat	16	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant Communities, Interspersion, Microtopography	3	
	TOTAL SCORE	54.5	

Wetland K

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 *less* than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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© 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 (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54© 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 wetlands should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54 © can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "*gray zone*" of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and 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 non-rapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC Rule 3745-1-54 ©.
Does the wetland otherwise exhibit *moderate* OR *superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was under-categorized by this method. A written justification for re-categorization should be provided on Background Information Form.	(NO)	A wetland may be under-categorized 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 © (2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

FINAL CATEGORY:
Category 2

APPENDIX E

ODNR Natural Heritage Review Response Letter

ODNR – Division of Natural Areas and Preserves Field Observation Documentation

Ohio Division of Wildlife
Michael R. Miller, Chief
2045 Morse Rd., Bldg. G
Columbus, OH 43229-6693
Phone: (614) 265-6300

1 November 2018

Erin Van Nort
Chagrin Valley Engineering, Ltd.
22999 Forbes Rd.
Cleveland, OH 44146

Dear Ms. Van Nort,

After reviewing the Natural Heritage Database, I find the Division of Wildlife has no records of rare or endangered species in the Morrow Co. Camp Preservation project area, including a one-mile radius, in Chester and Franklin Townships, Morrow County, Ohio. We are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges, parks or forests or other protected natural areas within a one-mile radius of the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

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

Sincerely,

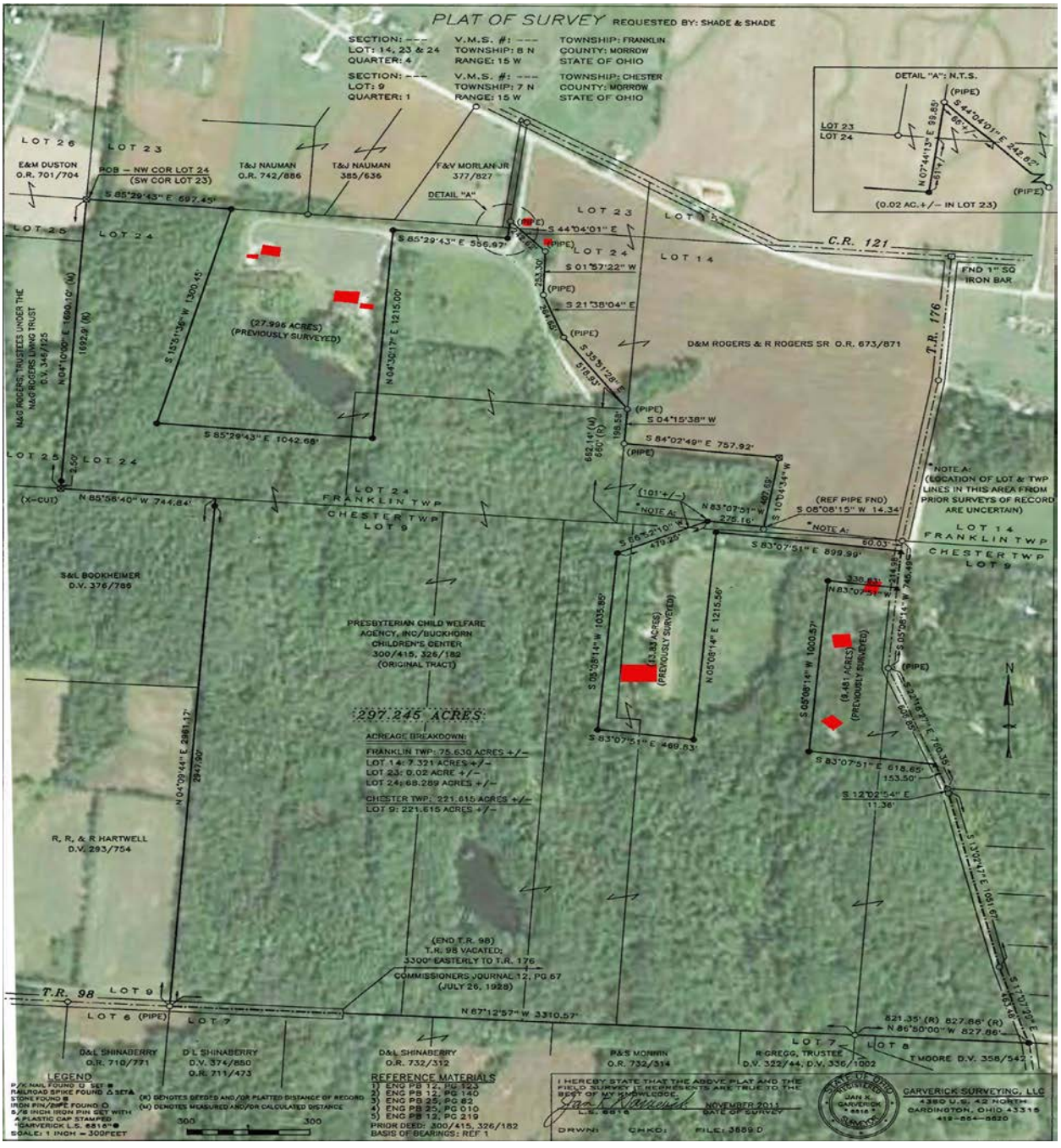
Debbie Woischke

Debbie Woischke
Ohio Natural Heritage Database Program

I visited the Buckhorn Camp on Tuesday, August 29th 2017 and spent several hours walking the property with Mr. Wagner. The property includes about 55 acres of developed land with another 290 acres undeveloped. The undeveloped portion is mostly forested. The wood is overall at mid-successional age. No old-growth stands were observed but there are some mature individuals. The understory in areas appeared to have some nice forest wildflowers and on the stream terraces there were wetlands with monkeyflower, Cardinal flower and other wetland forbs. The site is not of state significance but it is local significance as it is one or the largest tracts of forest remaining in Morrow County.

Surveyor – Rick Gardner, Chief Botanist

ODNR – Division of Natural Areas and Preserves



APPENDIX F

Landowner Letter of Intent to Sell
Certified Appraisal

September 25, 2019

Mr. David Vasarhelyi
The Trust for Public Land
1250 Old River Road, Suite 202
Cleveland, OH 44113

RE: Clean Ohio Conservation Fund – Letter of Intent to Sell and to Donate Land Value Match

Dear Mr. Vasarhelyi,

We are the current owners of the former Buckhorn Camp property in Morrow County, Ohio, that includes approximately 234+/- acres that you are seeking to acquire for conservation. We are very interested in seeing our property preserved and become a new nature preserve for the protection of natural resources and for the public to enjoy.

This Letter-of-Intent confirms that we are very interested in entering into negotiations for an Option Agreement to sell the property if the Clean Ohio Conservation Fund grant is awarded. We have authorized the Trust for Public Land and Morrow County Park District to complete an appraisal of the property. We understand and accept the appraised fair market value to be $2,128,000. We would agree to a cash purchase price of $1,596,000 which represents 75% of the property's fair market value. We also agree to donate the remaining $532,000 from the appraised value of $2,128,000 to serve as the necessary 25% match for the Clean Ohio Conservation Fund grant.

We hope that the grant will be successful and that we can see the property protected in perpetuity for everyone to enjoy.

Sincerely,

Brent Hayes, President
JBH Investments, LLC

THE APPRAISAL OF
A 338.52 ACRE CAMPGROUND
PLUS 2- 6,075 SF COMMUNITY CENTER BUILDNGS
7130 COUNTY ROAD 121
FREDERICKTOWN, OH 43019

Prepared for:
Trust for Public Land
1250 Old River Road, #202
Cleveland, Ohio 44113
Attention: Dave Vasarhelyi, Sr. Project Manager
And
Morrow County Park District

Prepared by:
The William Fall Group
300 Madison Avenue
Suite 900
Toledo, Ohio 43604

THE WILLIAM FALL GROUP

Real Estate Valuation and Analysis

July 22, 2019

Trust for Public Land
1250 Old River Road #202
Cleveland, Ohio 44113
Attention: Dave Vasarhelyi
And
Morrow County Park District

RE: Former Morrow County Church Camp
A 338.52 Acre Site Campground
7130 County Road 121
Fredericktown, OH 43019

Dear Mr. Vasarhelyi,

At your request, I am submitting an appraisal of the real property named above. The appraisal states my opinion of the Market Value of the Fee Simple Interest in the property subject to various assumptions, limitations, and comments appearing described in the accompanying report.

The function of this appraisal is for internal use. The client and intended user is Trust for Public Land and-or affiliates and the Morrow County Park District.

This valuation consists of an appraisal conforming to generally accepted appraisal standards as evidenced by Title XI of FIRREA and the Uniform Standards of Professional Appraisal Practice (USPAP) adopted by the Appraisal Standards Board of the Appraisal Foundation. It is presented under Standards Rule 2-2(a).

No responsibility has been assumed for matters legal in nature, nor has any opinion on title been rendered and this appraisal assumed marketable title. Liens and encumbrances, if any, have been disregarded and the property appraised as though free of indebtedness.

Employment in and compensation for making this report are in no way contingent upon the value reported and I certify that I have no present or future interest in the subject property.

Based on the analysis presented in the following report, it is my opinion that the Market Value of the Fee Simple Interest in the subject property, as is, as of November 7, 2018, was:

Timber Value (from 3rd Party) -	**$460,000**
Franklin Township 2 Campground Community Centers-	**$790,000**
Franklin County Land- 97.63 Acres	**$730,000**
Chester Township- 234.90 Acres-	**$1,760,000**

Total Property- $3,740,000
Three Million Seven Hundred Forty Thousand Dollars

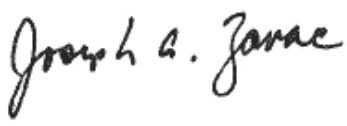
This valuation is for 100% real estate.

I hereby certify that, to the best of my knowledge and belief, the statements contained within this appraisal report, and upon which the opinions expressed herein are based, are correct, subject to the limiting conditions.

Implicit within this valuation is an exposure time of twelve to twenty-four months, which is believed reasonable for this type of property as it is presently used.

I trust that this report meets with your requirements, but if further service is needed, please contact me.

On behalf of The William Fall Group



Joseph A. Zavac MAI
Ohio Certified General Real Estate Appraiser No.2001021272
Michigan General Certified, Certification No. 69365
Illinois General Certified, Certification No. 553.002046
Indiana General Certified, License # CG41101320

Subject Photos– 338.53 Acres– 7130 County Road 121, Fredericktown OH

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Silverwood House

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Subject Photos– 338.53 Acres– 7130 County Road 121, Fredericktown OH

School House

Subject Photos– 338.53 Acres– 7130 County Road 121, Fredericktown OH

School House

Subject Photos– 338.53 Acres– 7130 County Road 121, Fredericktown OH

School House

Table of Contents

SUMMARY OF SALIENT FACTS

LOCATION:	7130 County Road 121, Fredericktown, Morrow County, Ohio 43019 (Chester and Franklin Township)
DATES OF VALUE:	November 7, 2018 As Is
DATE OF VIEWING:	November 7, 2018
PROPERTY INTEREST APPRAISED:	Fee Simple

SITE DATA:

SITE AREA:	338.52 acres per auditor records
ZONING:	Special Use District per Chester Township Zoning, Franklin Township is un-zoned
TOXIC WASTE:	None noted by or reported to this appraiser
CENSUS TRACT:	9654.00

HIGHEST AND BEST USE:

AS VACANT:	Park or recreational use
AS IMPROVED:	Campground/recreational space

IMPROVEMENT DATA:

TYPE:	Campground with a residence/schoolhouse
YEAR BUILT:	1970, Renovated 2007
SIZE:	2,522 SF (According to Morrow County Auditor)
CONDITION:	Average

IMPROVEMENT DATA:

TYPE:	Community Center Building
YEAR BUILT:	1995
SIZE:	2@ 6,075 SF (According to Morrow County Auditor)
CONDITION:	Average to Above Average

Note: The Community Center Buildings at the front of the property are valued separately within this appraisal due to its newer age and its positive location at the front of the property. These community center buildings are located on 3.0 acres of land each (allocation from parcel F14-001-00-056-01) at the front of the property and could be separated and sold individually rather easily. The School house building (2,522 SF) is treated as an amenity to the property within the sales comparison approach as it is located towards the center of the property and would not likely be separated from the campground property. The schoolhouse building is not valued separately within this appraisal.

Note: This valuation includes a Third-Party Timber report which indicates the timber value on the subject property is $460,000. This value from the third-party expert is included in the total value of the property as timber is considered to be part of the real estate value total.

VALUE INDICATORS

As Is

COST APPROACH: As Is.....Not Developed

SALES COMPARISON APPROACH:

FRANKLIN TOWNSHIP LAND (97.63 ACRES) $730,000
FRANKLIN TWP 2 COMMUNITY CENTERS ON 6 ACRES:.....$790,000

CHESTER TOWNSHIP LAND (234.90 ACRES).....$1,760,000

TIMBER VALUE (FROM 3rd PARTY TIMBER EXPERT): $460,000

TOTAL PROPERTY:.....$3,740,000

INCOME APPROACH: .....Not Developed

VALUE OF THE FEE SIMPLE INTEREST

FRANKLIN TOWNSHIP LAND (97.63 ACRES) $730,000
FRANKLIN TWP 2 COMMUNITY CENTERS ON 6 ACRES:.....$790,000

CHESTER TOWNSHIP LAND (234.90 ACRES).....$1,760,000

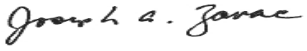
TIMBER VALUE (FROM 3rd PARTY TIMBER EXPERT): $460,000

TOTAL PROPERTY:.....$3,740,000

CERTIFICATION

I hereby certify that I did personally view the subject property and have considered the factors affecting its valuation and have formed an opinion of value of a specified amount as of a specified time. Except as otherwise noted in this report, I hereby certify that to the best of my knowledge and belief:

1. To the best of my knowledge and belief, the statements of fact contained in this report, upon which the analysis, opinions and conclusions are based, are true and correct.
2. The reported analysis, opinions and conclusions are limited only by the reported assumptions and limiting conditions, (imposed by the nature of the assignment or the undersigned) and are my personal, impartial and unbiased professional analysis, opinions and conclusions.
3. I have no present or prospective future interest in the property that is the subject of this report, and no personal interest with respect to the parties involved.
4. I have no bias with respect to the property that is the subject matter of this appraisal report or the parties involved with this assignment.
5. My engagement in this assignment was not contingent upon developing or reporting predetermined results.
6. My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
7. The reported analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics & Standards of Professional Appraisal Practice of the Appraisal Institute and the Appraisal Foundation which include the Uniform Standards of Professional Appraisal Practice.
8. No one other than the undersigned provided significant professional assistance to the person signing this report.
9. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
10. I have not previously provided any services regarding the subject property within the prior three years of the effective date (per the Conduct Section of 2018-2019 USPAP).
11. I am presently certified by the State of Ohio as a Certified General Real Estate Appraiser through March 12, 2020, Certification No. 2017003658. Appraisers in the State of Ohio are required to be licensed by the Division of Real Estate and Professional Licensing. I am also licensed as a Certified General Real Estate Appraiser in Michigan, Indiana, Illinois and Georgia.



Joseph A. Zavac, MAI

ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal is subject to the following assumptions and limiting conditions.

1) The appraiser undertook no survey of the subject property.
2) No responsibility is assumed by the appraisers for matters which are of a legal nature, nor is any opinion on the title rendered herewith. Good and marketable title is assumed.
3) The information contained herein has been gathered from sources deemed to be reliable. No responsibility can be taken by the appraisers for its accuracy. Correctness of estimates, opinions, dimensions, sketches, and other exhibits which have been furnished and have been used in this report are not guaranteed. The value opinion rendered herein is considered reliable and valid only as of the date of the appraisal due to rapid changes in the external factors that can significantly affect the property value.
4) This study is to be used in whole and not in part. No part of it shall be used in conjunction with any other appraisal. Publication of this report or any portion thereof without the written consent of the appraiser is not permitted.
5) The appraisers herein, by reason of this report, are not required to give testimony in court with reference to the property appraised unless notice and proper arrangements have been previously made therefore.
6) The value opinion assumes responsible ownership and competent management. The appraiser assumes no responsibility for any hidden or unapparent conditions of the property, subsoil, or structures which would render it more or less valuable. No responsibility is assumed for such conditions, or for engineering which are required to discover such factors.
7) Neither all nor any part of the contents of this report shall be conveyed to the public through advertising, public relations, news, sales, or other media without the written consent and approval of the authors, particularly as to valuation conclusions, the identity of the appraisers, or the firm with which they are connected, or any reference to the Appraisal Institute or the Appraisal Foundation.
8) That all mortgages, liens, encumbrances, and leases have been disregarded except as specified within the report.
9) That it is assumed that all applicable zoning and use regulations and restrictions have been complied with unless a non-conformity has been stated, defined, and considered in the appraisal report.
10) That it is assumed that all required licenses, consents, or other legislative or administrative authority from any local, state, or national governmental or private entity or organization have been or can be obtained or renewed for any use on which the values contained in this report are based.
11) That it is assumed that the utilization of the land and improvements is within the boundaries or property lines of the property described and that there is no encroachment, trespass, or easement unless stated within the report.
12) That this appraisal involves the real estate only and does not include equipment or personal property, unless otherwise stated.

13) The projections of income and expenses, including the reversion at time of resale, are not predictions of the future. Rather, they are the best estimate of current market thinking of what future trends will be. No warranty of representation is made these projections will materialize. The real estate market is constantly fluctuating and changing. It is not the task of the appraiser to estimate the conditions of a future real estate market, but rather to reflect what the investment community envisions for the future in terms of expectations of growth in rental rates, expenses, and supply and demand.

14) Unless otherwise stated within this report, the existence of any hazardous material, which may or may not be present on the subject property, was not observed by the appraiser. The Market Value Opinion is predicated on the assumption that there is not a significant amount of hazardous material on or in the subject property that would cause a loss in value. However, no responsibility is assumed for any such conditions, or for any expertise or engineering knowledge required to discover them. Thus, we recommend engaging an expert in this field to determine if any such conditions exist.

15) That no environmental impact studies were either requested or made in conjunction with this appraisal, and the appraiser hereby reserves the right to alter, amend, revise, or rescind any of the value opinions, based upon any subsequent environmental impact studies, research or investigation.

16) That this appraisal was prepared for stated purposes and will not be used for any other purpose or published, in whole or in part, without the written consent of the appraisers.

17) The improvement is considered to be within the lot line and, except as noted herein, is in accordance with local zoning and building ordinances. Any plots, diagrams, and drawings found herein are to facilitate and aid the reader in picturing the subject property and are not meant to be used as references in matters of survey.

18) The property is appraised as though under reasonable ownership and competent management.

19) The Americans with Disabilities Act ("ADA") became effective January 26, 1992. I have not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the ADA. It is possible that a compliance survey of the property, together with a detailed analysis of the requirements of the ADA, could reveal that the property is not in compliance with one or more of the requirements of the Act. If so, this fact could have a negative effect upon the value of the property. Since I have no direct evidence relating to this issue, I did not consider possible non-compliance with the requirements of ADA in estimating the value of the property.

20) That acceptance of and/or use of this appraisal report constitutes acceptance of the foregoing limiting conditions.

EXTRAORDINARY ASSUMPTIONS

In addition to the Assumptions and Limiting Conditions listed within this report, the values contained herein are contingent upon the following extraordinary assumptions and limiting conditions:

Note 1: This valuation includes a Third-Party Timber report which indicates the timber value on the subject property is $460,000. This value from the third-party expert is included in the total value of the property as timber is considered to be part of the real estate value total.

Note 2: The Community Center Buildings at the front of the property are valued separately within this appraisal due to its newer age and its positive location at the front of the property. These community center buildings are located on 3.0 acres of land each (allocation from parcel F14-001-00-056-01) at the front of the property and could be separated and sold individually rather easily. The School house building (2,522 SF) is treated as an amenity to the property within the sales comparison approach as it is located towards the center of the property and would not likely be separated from the campground property. The schoolhouse building is not valued separately within this appraisal.

PROPERTY IDENTIFICATION / PURPOSE / FUNCTION / DATE

ADDRESS

7130 County Road 121, Fredericktown, Morrow County, OH 43019 (Chester and Franklin Township)

The property is identified for real estate tax purposes as parcels:

Tax Parcels: D10-001-00-228-02 - 217.175 acres
Tax Parcels: D10-001-00-228-01 - 17.72 acres
Tax Parcels: F14-001-00-055-08 - 75.63 acres
Tax Parcels; F14-001-00-056-01 – 27. 996 acres
Total Site Size- 338.521 Acres

Community Centers- 6 Acres allocated from a 27.996-acre parcel (F14-001-00-056-01) for each of the 6,075 SF Community Center Buildings

LEGAL DESCRIPTION

See copy of auditor's records in addendum.

RECENT PROPERTY HISTORY

The subject is under the ownership of Buckhorn Children's Center/Presbyterian Child Welfare Agency of Buckhorn Kentucky. The subject has last transferred on October 25, 2017. This was an internal transfer with no amount noted. The subject was formerly listed for $2,094,000 as the Presbyterian Church was trying to sell this property. Matt Gregory, Andy Dutcher and Philip Bird of NAI Ohio Equities handled the listing. The total property size associated with this listing was 348.55 acres. Several parcels were included that are not included in this appraisal. The listing price may have been below market based on a highly motivated seller. The church group was reported to want to sell this in a reduced time frame at a reduced price due to the high maintenance costs associated with this property. Andy Maytac is reported to have purchased this property from the owner. However, the purchaser did not disclose the sale price. Morrow County property records have not indicated a sale of the property through the Auditor Property Record Card (found in the addendum). It is currently not listed for sale as of the appraisal date. The subject is believed to have appreciated since the date of the listing, which expired several years ago.

PURPOSE OF THE APPRAISAL

The purpose of this appraisal is to estimate the market value of the Fee Simple Interest of the subject property as of the appraisal date.

FUNCTION OF THE APPRAISAL

The function of this appraisal is for internal use. The client and intended user is Trust for Public Land and-or affiliates and/or the Morrow County Park District.

DATE OF VALUE AND PROPERTY VIEWING

The effective date of the appraisal is November 7, 2018 As Is. The date of the last viewing was November 7, 2018.

SCOPE OF THE APPRAISAL

The scope of this appraisal encompasses the necessary research and analysis to prepare a report in accordance with the Uniform Standards of Professional Appraisal Practice (USPAP) adopted by the Appraisal Standards Board of the Appraisal Foundation and develop a conclusion about the property's value as is using the applicable approaches. The Sales Comparison Approach is developed within this analysis.

Many considerations will be indirectly implied even when not mentioned in this report due to the nature of this assignment. Market research for this appraisal was gathered from numerous sources including, but not limited to, the following:

Public records of Morrow County and their associated web sites
Chester and Franklin Township zoning & development
Andy Maytac- Owner
Local real estate brokers, appraisers and market participants
Associate appraisers from within The William Fall Group and company files
Loopnet Commercial MLS
CoStar Commercial Comparable Database

Our primary emphasis in the data research process centered on the Morrow County, Ohio, area in which the subject project is located. Due to a lack of sales data available for campgrounds, sales were analyzed throughout the Midwest, but primarily from Ohio. The subject campground is primarily vacant land, equating to a fee simple value. No leases exist at the subject property.

I personally reviewed each sale used in this report and made a determination of comparability based on factors including, but not limited to, location, topography, size, shape and market conditions. When possible, sales were verified with individuals involved or familiar with each transaction to determine if they were arm's-length and to discover other factors such as availability of utilities, time on the market, financing and buyer/seller motivation. The sales researched were also verified through the local auditor's office and multiple listing services.

The Cost Approach is based on the premise that the value of a property can be indicated by the current cost to construct a reproduction or replacement of the improvements minus the amount of depreciation evident in the structures from all causes, plus the value of the land. The Cost Approach was not developed in conjunction with this appraisal and due to the subjectivity of the depreciation estimate and the presence of economic obsolescence in the current market. In addition, a purchaser of the subject would be unlikely to base a purchase price on the Cost Approach.

The Sales Comparison Approach is most viable when an adequate number of properties of similar types have been sold. In this approach, a value indication is derived by comparison of properties similar to the subject property. Adjustments are applied according to condition of sale, financing terms; market conditions (time), location and physical characteristics indicating a range in which the value of the subject falls. The adjustments will be developed into a unit of measure applied against the subject to give the estimated most probable selling price. This approach was utilized within this report using campground and park land type sales in estimating an overall value for the subject property on a per acre basis and also for the Community Center Building on 3 acres. This is the sole value indicator within this appraisal.

The Income Approach addresses the rental range from similar facilities in the area. Direct capitalization is employed, with an overall capitalization rate derived from market sales of campgrounds and/or land purchased for park use. The subject is appraised subject to market level rental rates, expense estimates, and commonly accepted financial parameters. This approach was not used within this report. Financials were not provided to the appraiser. It is unlikely the subject property would be operated on an income-based basis. The subject was not operated as a profit operation. Therefore, this approach was not developed due to the non-profit status for the subject campgrounds.

Numerous sources were utilized in collecting the data analyzed in the following report.

COMPETENCY OF APPRAISER

Joseph Zavac's prior experience and familiarity with this property type is believed sufficiently reasonable so as to comply with the Competency Provision of USPAP. Additionally, input was sought from market participants active in this type of property that further reinforced the background and conclusions developed. Appropriate sources are identified as needed.

PROPERTY INTEREST APPRAISED

FEE SIMPLE INTEREST (aka Fee Simple Estate) (Source: Appraisal Institute, *The Dictionary of Real Estate Appraisal*, 6th ed. (Chicago: Appraisal Institute, 2015).

The property rights being appraised are Fee Simple. *Fee Simple Interest* is defined as *"absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power and escheat."*

Fee Simple Interest is the least limited interest and most complete and absolute ownership in land; it is of indefinite duration freely transferable and inheritable.

LEASEHOLD INTEREST

The subject property is essentially vacant. The subject buildings are unoccupied. Therefore, this is equivalent to a fee simple interest. Therefore, no positive or negative leasehold exists.

DEFINITION OF MARKET VALUE

MARKET VALUE

The most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after a reasonable exposure in a competitive under all condition's requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.

Implicit in this definition are the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1) Buyer and seller are typically motivated;
2) Both parties are well informed or well advised, and acting in what they consider their best interests;
3) A reasonable time is allowed for exposure in the open market;
4) Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto, and
5) The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

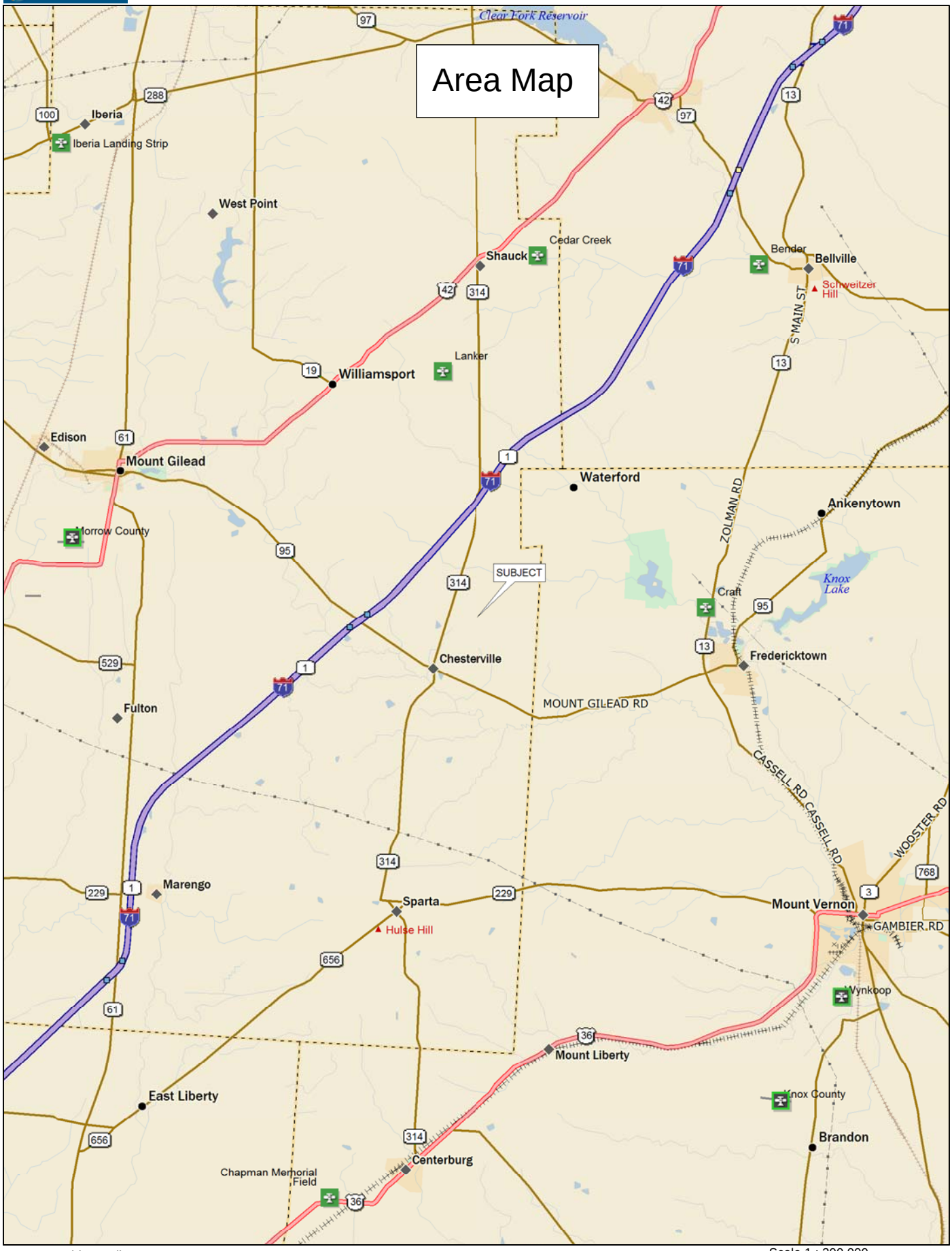
(Sources: Appraisal Institute, *The Dictionary of Real Estate Appraisal*, 6th ed. (Chicago: Appraisal Institute, 2015) and *The Code of Federal Regulations* (12 CFR 34.42 2 [g]).).

AS IS MARKET VALUE (as defined in *The Federal Register*, Volume 75, No. 237, p. 77471)

The estimate of the market value of real property in its current physical condition, use and zoning as of the appraisal date. (Source: Appraisal Institute, *The Dictionary of Real Estate Appraisal*, 6th ed. (Chicago: Appraisal Institute, 2015).

(Proposed Interagency Appraisal and Evaluation Guidelines, OCC-4810-33-P 20%)

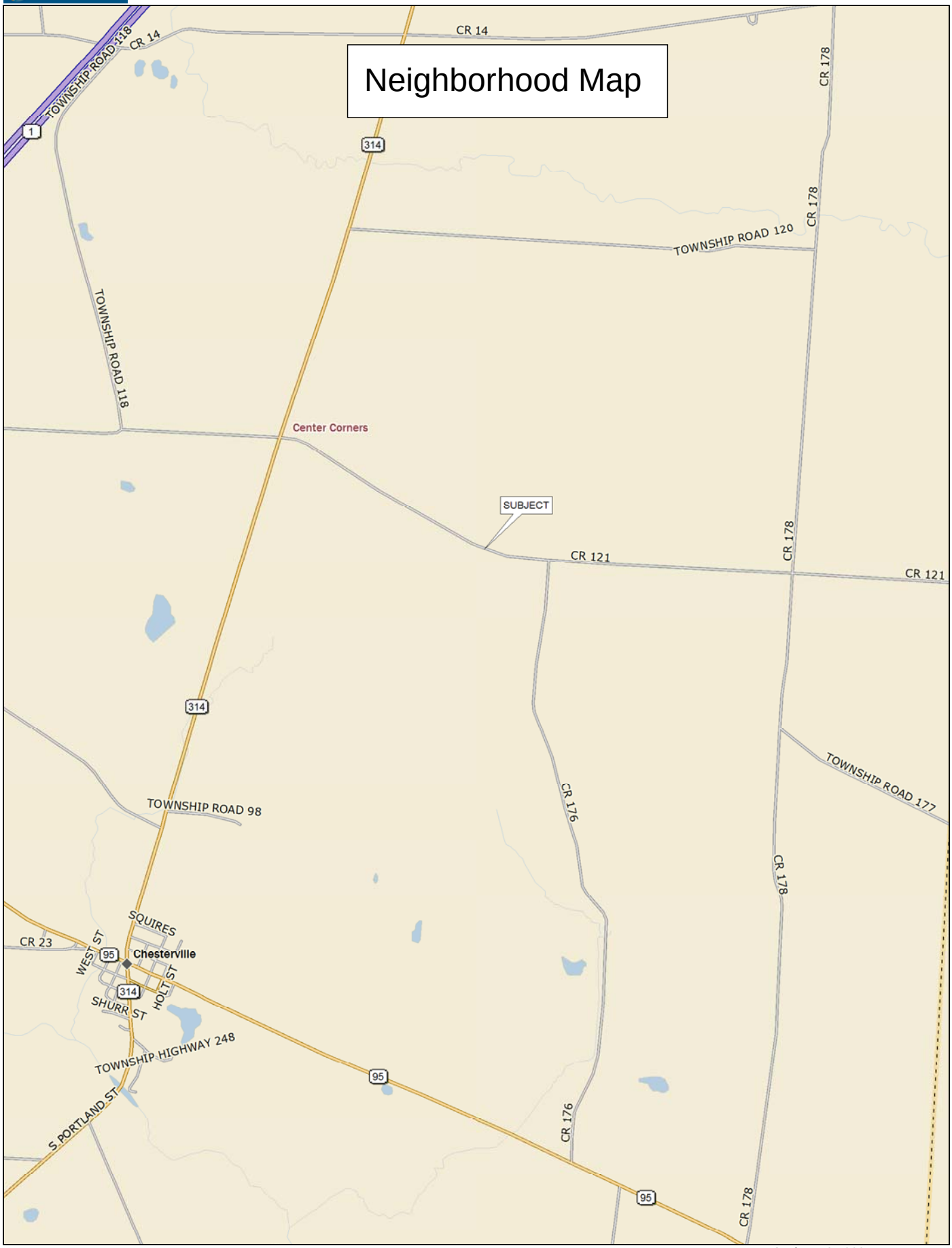
Area Map



TN
MN (7.6°W)

Scale 1 : 200,000
1" = 3.16 mi
Data Zoom 10-0

Neighborhood Map



TN
MN (7.6°W)

Scale 1 : 25,000
0 600 1200 1800 2400 3000 ft
0 200 400 600 800 1000 m
1" = 2,083.3 ft
Data Zoom 13-0

NEIGHBORHOOD DATA

A neighborhood may be defined as a group of complimentary land uses. Social, economic, governmental, and environmental forces all affect property value in the vicinity of a subject property, which, in turn, directly affects the value of the property itself. It is common practice to delineate a neighborhood's boundaries, which is an area within which the forces affect all surrounding properties in the same way they affect the subject.

The subject property is located on the south side of County Road 121, in Fredericktown, Morrow County, OH. The subject property is located in Chester and Franklin Township. The subject is a large campground affiliated with the Presbyterian Church. This campground (348+/- acres) is located near both Chesterville and Fredericktown. 338.52 acres are included within this appraisal. The main access to the campground is from County Road 121. The campground is seasonal in nature with most activities occurring from May to October. However, the campground is available year-round to various groups. The subject is located in Morrow County and the county seat is Mount Gilead to the northwest. The subject is located at the eastern central portion of the county. the subject has about 103.626 acres in Franklin Township including two Community center buildings at the front of the property and 234.90 acres in Chester Township.

The subject is located in Chester (south) and Franklin Township (north), which is west of the city of Fredericktown and north of Chesterville. Zoning is Special Use District (by Chester Township) and un-zoned by Franklin Township. The immediate area is primarily a mix of agricultural and residential. Most single-family homes were constructed from the 1920's to the early 1980's in the area. The subject is in a rural area about a half mile outside Fredericktown, OH. Morrow County has a population of 34,994 (2017 estimate).

This vicinity has a good level of accessibility to major transportation routes including I-71, nearby to the west within a few miles. Mount Vernon in Knox County is about 20 miles southeast. Mansfield is about 30 miles northeast and the city of Columbus is about 40 miles southwest. There is reasonable support for campground applications such as the subject due to the population of Morrow County (34,827) as of the 2010 census.

The surrounding vicinity of the subject is about 20-30% built-up with most of the area dominated by agricultural properties. Most improved properties in this vicinity are typically of average quality construction and are receiving adequate maintenance.

There are several ponds and streams that run through the property which is a draw for area campers. The subject campground has some hilly areas and some flat terrain. The subject's location, as evaluated for campground or recreational purposes, is rated as average to above average.

Morrow County Description

Morrow County is a county located in the central portion of U.S. state of Ohio. As of the 2010 census, the population was 34,827. Its county seat is Mount Gilead. The county was organized in 1848 from parts of four neighboring counties and named for Jeremiah Morrow, Governor of Ohio from 1822 to 1826. Shawnee people used the area for hunting purposes before white settlers arrived in the early 19th century. Morrow County is included in the Columbus, OH Metropolitan Statistical Area. In 2010, the center of population of Ohio was located in Morrow County, near the village of Marengo.

Tourist areas include: Mount Gilead State Park; Amish farms and businesses near Johnsville and Chesterville; the Mid-Ohio Sports Car Course near Steam Corners; the rolling Allegheny foothills of eastern Morrow County; the site of the birthplace of President Warren G. Harding near Blooming Grove; the site of the former Ohio Central College in Iberia; the early 19th-century architecture of buildings in Chesterville, Ohio; the Revolutionary War Soldiers' Memorial in Mount Gilead; the Civil War monument in Cardington; and the mid-19th-century architecture of the Morrow County Courthouse and Old Jail in Mount Gilead.

Morrow County Demographics

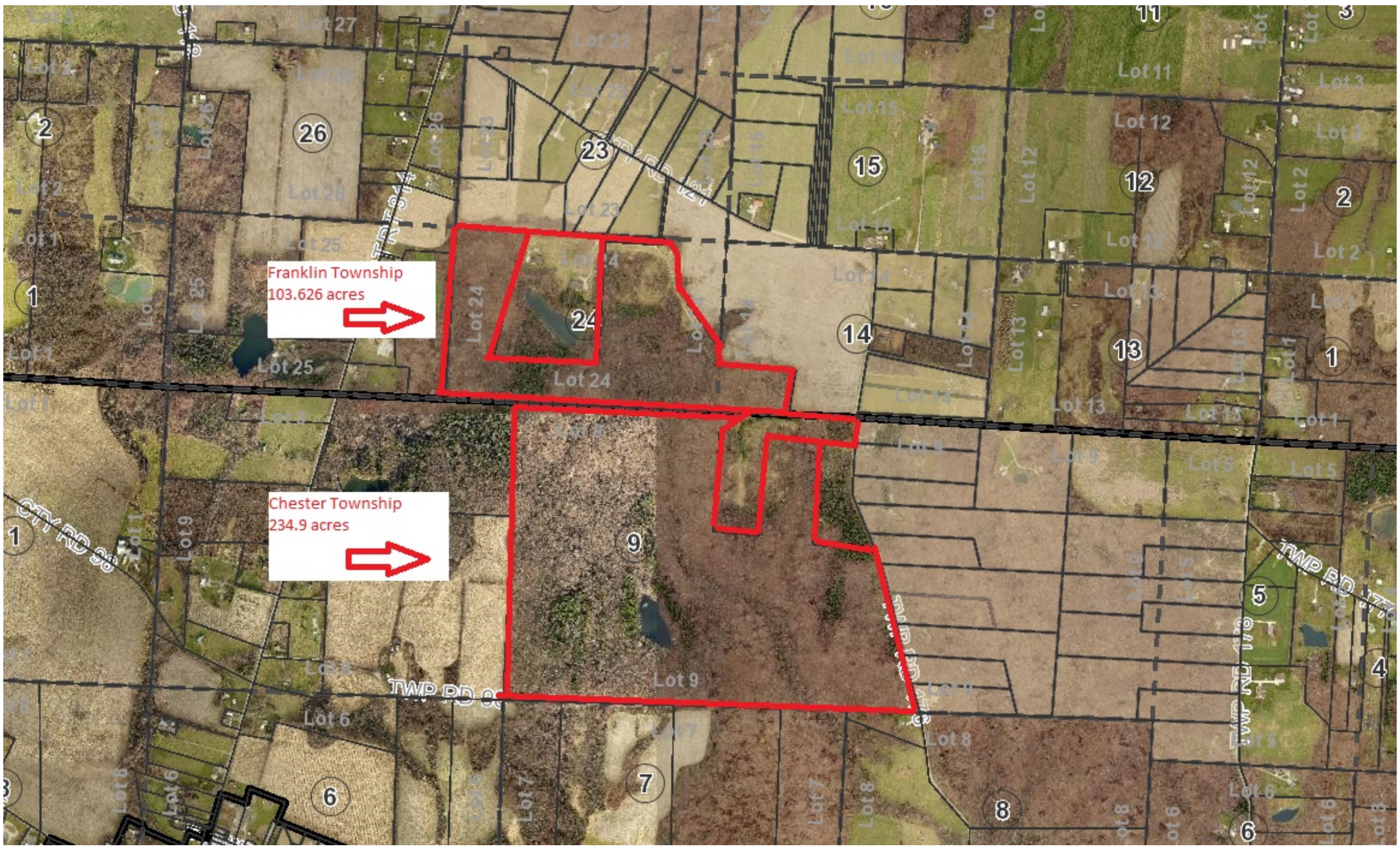
2010 census

As of the 2010 United States Census, there were 34,827 people, 12,855 households, and 9,578 families residing in the county. The population density was 85.8 inhabitants per square mile (33.1/km^2). There were 14,155 housing units at an average density of 34.9 per square mile (13.5/km^2).] The racial makeup of the county was 97.7% white, 0.3% black or African American, 0.3% Asian, 0.1% American Indian, 0.2% from other races, and 1.3% from two or more races. Those of Hispanic or Latino origin made up 1.1% of the population. In terms of ancestry, 30.8% were German, 16.1% were American, 14.4% were Irish, and 13.3% were English.

Of the 12,855 households, 35.1% had children under the age of 18 living with them, 59.5% were married couples living together, 9.5% had a female householder with no husband present, 25.5% were non-families, and 20.7% of all households were made up of individuals. The average household size was 2.68 and the average family size was 3.08. The median age was 39.5 years.

The median income for a household in the county was $49,891 and the median income for a family was $55,980. Males had a median income of $41,096 versus $32,911 for females. The per capita income for the county was $20,795. About 7.5% of families and 10.8% of the population were below the poverty line, including 13.9% of those under age 18 and 9.5% of those age 65 or over.

Plat Map


Franklin Township
103.626 acres
Chester Township
234.9 acres

SITE DESCRIPTION

Location: The subject site is located on the south side of County Road 121 and west of County Road 176 in Fredericktown, Morrow County, Ohio 43019 (Chester and Franklin Township).

Shape: The subject site is irregular in shape.

Area: The site has a total area of 338.52 acres per county records and documentation by the client. 6.0 additional acres are included for the 2 community center buildings at the front of the property (allocated from Parcel F14-001-00-056-01)

Frontage: The subject has road frontage on County Road 121.

Topography: The subject site is generally level and at normal grade with the adjoining properties.

Street Improvements: County Road 121 is an asphalt paved two-lane road.

Soil Condition: No soil report of the subject property has been made available or reviewed; however, it is assumed and appears that the soil is of satisfactory load-bearing capacity to support the existing subject structures. No evidence to the contrary was observed upon our physical viewing of the property. Drainage of the site appears to be adequate.

Utilities: Public utilities are available to the site.

Access: Access to the subject site is from County Road 121.

Land Use Restrictions: Although no authoritative report of title was provided or reviewed, for this report, there does not appear to be any easements, encroachments, or restrictions that would adversely affect the utilization of the site. A survey is recommended for final determination of any such adverse conditions.

Zoning:

The subject is zoned Special Use District by Chester Twp. and un-zoned by Franklin Township. The subject's campground use is a legal conforming use.

We know of no deed restrictions, private or public, that further limit the subject property's use. We cannot guarantee that no such restrictions exist. Deed restrictions are a legal matter and only a title examination by an attorney or Title Company can usually uncover such restrictive covenants. Thus, we recommend a title search to determine if any such restrictions do exist.

Flood Hazard:

The subject does not appear to be in a high flood risk plain according to Community Panel 390868 0175 E, dated June 2, 2009, of the National Flood Insurance Rate Map. The subject is in Flood Hazard Zone X and, therefore, may not require flood insurance. However, further inquiry is strongly recommended.

Toxic Waste:

No toxic waste was noted by this appraiser.

Environmental Disclaimer:

Unless otherwise stated within this report, the existence of any hazardous material, which may or may not be present on the subject property, was not observed by the appraiser. The Market Value Opinion is predicated on the assumption that there is not a significant amount of hazardous material on or in the subject property that would cause a loss in value. However, no responsibility is assumed for any such conditions, or for any expertise or engineering knowledge required to discover them. Thus, we recommend engaging an expert in this field to determine if any such conditions exist.

Conclusion:

The subject site is sufficient in size to support the improvements with average space allocated for parking area, woods, cabins, lodges, pool and green space. Ingress and egress are adequate with access from County Road 121.

Secondary access is from Crider Road. Frontage and depth relationship is adequate. Overall site rating is considered to be average.

Flood Map Report

For Property Located At

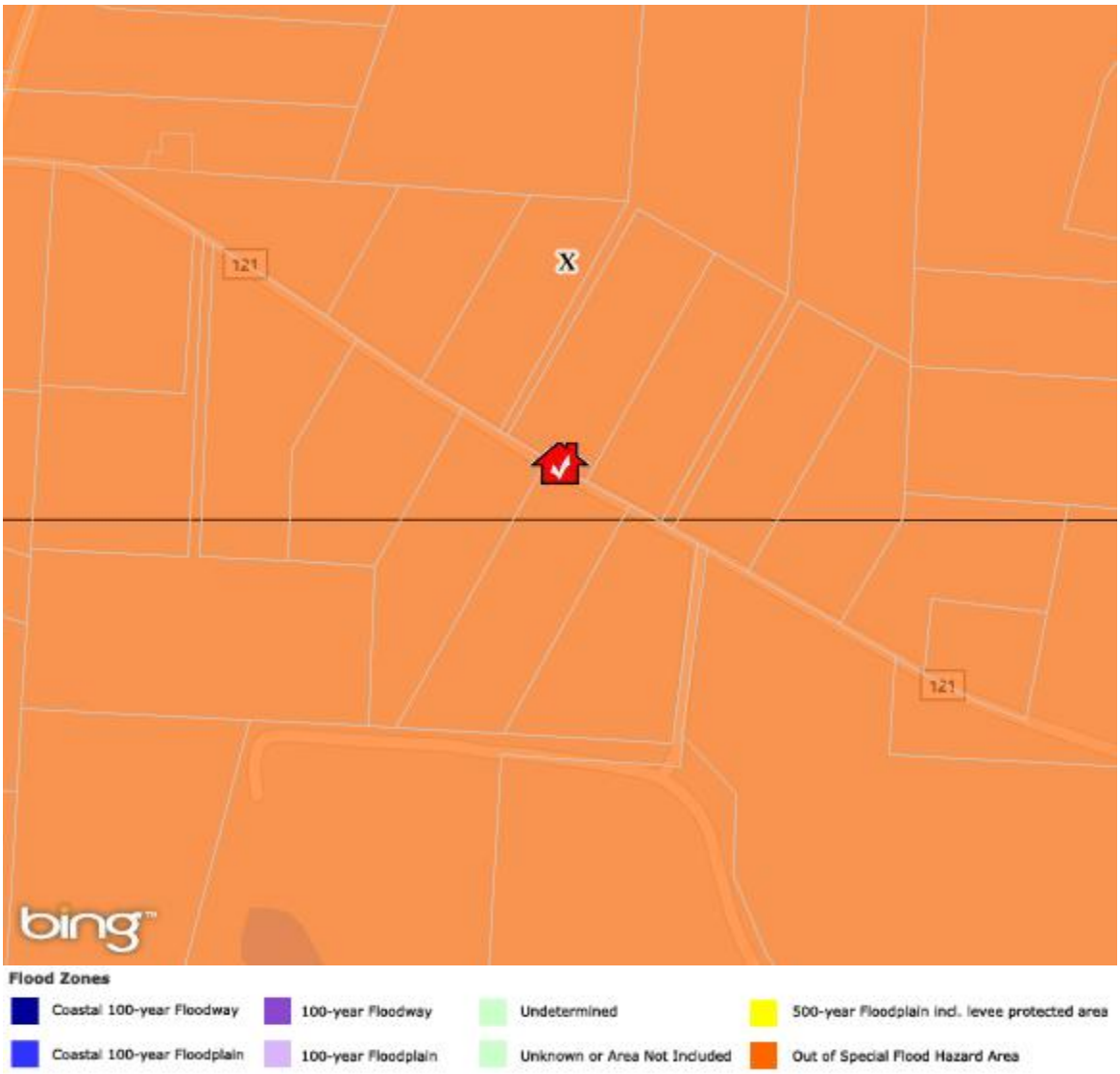
7130 COUNTY ROAD 121, FREDERICKTOWN, OH 43019

Report Date: 10/30/2018 **County:** MORROW, OH

Flood Zone Code	Flood Zone Panel	Panel Date
X	390868 - 39117C0175E	06/02/2009
Special Flood Hazard Area (SFHA)	**Within 250 ft. of multiple flood zones?**	**Community Name**
Out	No	MORROW COUNTY

Flood Zone Description:

Zone X-An area that is determined to be outside the 100- and 500-year floodplains.



BUILDING IMPROVEMENT DESCRIPTION

The property being appraised is a campground consisting of a former school house building. This facility on the subject property is in average condition. This structure was viewed from the interior and exterior. No deferred maintenance was witnessed by the appraiser.

The main buildings on site are briefly described as:

- School House- Built in 1970, renovated in 2007, 2,522 SF; converted to residence
- 2 Front Community Center Buildings- Built 1995/1996, 6,075 SF each or 12,150 SF

All are wood construction with asphalt roofs in average to above average condition.

The subject property is assessed at 35% of Market Value by the State of Ohio. Values provided by the Morrow County Auditor's Office (2018) are as follows:

		7130 County Road 121, Fredericktown Ohio (Presbyterian Church Camp)								
		Parcel Tax Information								
					Land Value	Building Value	Total Value			
		Parcel #	Acres	Owner	Market (100%)	Market (100%)	Market (100%)	Taxes (Annual)	Year Built	Building Size
North	Franklin Twp	F14-001-00-055-08	75.63	JBH Investments LLC	$204,200	$0	$204,200	$3,435.20		-
North	Franklin Twp	F14-001-00-056-01	27.996	JBH Investments LLC	$121,500	$1,025,900	$1,147,400	$19,302.88	1995	12,150
South	Chester Twp	D10-001-00-228-02	217.18	JBH Investments LLC	$668,100	$0	$668,100	$12,004.84		-
South	Chester Twp	D10-001-00-228-01	17.72	JBH Investments LLC	$85,000	$85,400	$170,400	$3,061.80	1970	2,522
		Totals	**338.53**		**$1,078,800**	**$1,111,300**	**$2,190,100**	**$37,804.72**		**14,672**

Conclusion

The subject can expect taxes to be reduced significantly if the sale is to a non-profit group. Taxes then would be zero or close to zero based on non-profits paying little or no taxes.

MARKET ANALYSIS (*General Summary*)

The objective of this section is to gather, analyze, and present as many market components as reasonably possible. The conclusions contained in this section are based on the best judgments of the analyst; the appraisers make no guarantees or assurances that the projections or conclusions will be realized as stated. It is their function to provide their best effort in data collection and to express opinions based on their evaluations. At all times, they are acting as an unbiased, third party principal. The Market Analysis briefly highlights pertinent aspects of the general U.S. macro-economy, examines recent and specific trends regarding the subject as a component of the regional area, and explores the subject location compared to directly competing locales.

MACROANALYSIS

Weekly Markets Commentary by David Joy, **Chief Market Strategist, Ameriprise Financial (November 5, 2018)**

After establishing a new closing low for the recent downturn last Monday, U.S. equities staged a strong three-day rebound, pushing the S&P 500 to a 2.4 percent gain for the week and back into positive territory for the year, up 1.9 percent. It was the best weekly gain for the index since March and could have been even better if not for a modestly disappointing earnings report from Apple that triggered a tech-led selloff on Friday.

Beyond the rise in equities, there were other signs of a tentative rise in risk appetites last week, including a drop in volatility. After rising to an intraday high of 27.8 on Monday, the VIX index fell back to 19.5 at week's end, although that remains elevated relative to its average for the year of 15.7. The yield on the ten-year note surged higher by 13 basis points to close at 3.21 percent, just below its previous cycle high of 3.23 percent on October 5. The two-year note traced a similar path, rising 12 basis points from the previous week's close to end the week at 2.92 percent, also a cycle high. And high yield spreads narrowed after widening sharply the previous week. Overseas equity markets rose sharply as well. The EuroStoxx 50 index climbed 2.5 percent in euro terms, the Nikkei jumped 5.0 percent in yen, and the MSCI EM index surged 5.4 percent, including a 3 percent gain in the Shanghai Composite index.

Third quarter earnings and October jobs report show encouraging signs

No doubt some of last week's rebound came in response to oversold conditions that prompted some bargain hunting. Third quarter earnings continue to exceed expectations as well. Three quarters of S&P 500 companies have now reported, and the expected aggregate growth rate has climbed to 24.9 percent, according to Factset. But also contributing to the better tone were reports that the UK and EU had reached a tentative agreement on the status of financial services after Brexit, giving a boost to the pound. And talks between Presidents Trump and Xi offered at

least a flicker of hope regarding the trade dispute with China, although the White House later in the week downplayed the extent of any progress. And a speech by Xi on Monday of this week contained little hint progress either.

The October jobs report showed ongoing strength in the labor market. The economy created 250,000 new non-farm jobs, a strong rebound from the September revised total of 118,000, putting the three-month average gain at a solid 218,000. At the same time, the participation rate climbed to 62.9 percent, leaving the unemployment rate unchanged at 3.7 percent. Year-over-year growth in average hourly earnings rose to 3.1 percent, its highest since April 2009. But the extent of the rise was taken in stride because the modest 0.2 percent monthly increase in October replaced a 0.2 percent decline from last October in the calculation. And earlier in the week the core PCE deflator showed a steady 2.0 percent year-over-year increase in September. Overseas, the economic data was less encouraging, however. Growth in the Eurozone disappointed in the third quarter. In China, the pace of manufacturing activity just barely managed to remain above the growth line, and industrial production declined in Japan.

This week's domestic economic calendar includes flash PMIs, ISM services, producer prices, and consumer sentiment. The Fed also meets, although little change is expected. And another roughly 15 percent of S&P 500 companies report earnings.

What to expect from midterm elections

All of that will, of course, take a back seat to Tuesday's midterm elections. Polls and prediction markets suggest that control of the Senate will remain Republican, while Democrats are expected to regain control of the House. But neither of these outcomes are a foregone conclusion, especially given the high degree of interest expressed by registered voters in general and among those considered likely to vote, suggesting a higher-than-typical turnout for a midterm election. The outcome will have implications for the likelihood of legislation regarding tax policy, healthcare, prescription drug pricing, infrastructure spending, and immigration policy among others. History tells us that the president's party typically, although not always, loses seats in Congress in the midterm election. Losing seats, however, is not necessarily the same as losing control of one or both houses of Congress. And as we have learned with recent experience, polls are not always accurate predicters of results. The Democrats would need to gain 23 seats out of approximately 75 that are considered competitive to take the House. In the Senate, 35 seats are up for election, including two special elections. Democrats would need to gain two seats to take control, but that is not considered likely. There are also a number of elections at the state level, including 36 governorships, important in part due to the upcoming congressional redistricting following the 2020 census.

(Source: Ameriprise https://www.ameriprise.com/research-market-insights/market-insights/perspectives/weekly-commentary/)

Kiplinger's Economic Forecasts

A Good Third Quarter, but a Slowdown Is Ahead

Growth was a solid 3.5% in the third quarter, following a strong second-quarter gain of 4.2%. However, coming quarters will likely see only a mid-2% pace. Consumer spending grew 4% in the third quarter, the best gain since 2014. Government spending expanded at a good rate, and businesses added to inventories. However, business investment slowed markedly, and housing declined for the third straight quarter. Imports soared, worsening the trade deficit.

Expect 2019 growth to slow to 2.7% from 2.9% this year. Although Americans will keep spending at a healthy clip because of higher wages and low unemployment, the tight labor market will make it difficult for businesses to expand. Additionally, firms may pull back on investment spending in response to slower growth. Finally, high home prices and rising mortgage rates have likely priced out many would-be home buyers, especially in the lower price ranges.

The trade war is likely to ding growth just a bit, as the net effect of a slowdown in both exports and imports is likely to be small. However, uncertainty could create knock-on effects that slow business investment plans, and the need to rejig supply chains will reduce productivity and increase costs.

Because of rising wages, look for the Federal Reserve to hike interest rates in December and three more times in 2019. Though wage gains are a notoriously poor predictor of inflation, the Fed is likely to use this as justification to continue its rate-hiking program well into 2019. Also, with the change in Federal Reserve Board members, there are now definitely more pro-hike board members, who are worried about a potential rise in inflation, than those who are against boosting rates.

(Source: Kiplinger's http://www.kiplinger.com/article/business/T019-C000-S010-gdp-growth-rate-and-forecast.html)

Long Rates Will Head Up Later

Long-term interest rates have dropped a bit as some equity investors retreat to the bond market, which usually happens during stock market corrections. However, once the correction is over, long rates should head up again. The Federal Reserve's rate hike program will put upward pressure on long rates well into next year. Also, the low unemployment rate and a tight labor market will keep upward pressure on wages. Though wage growth does not cause inflation in the near term, bond market participants will worry that fatter paychecks will prompt the Federal Reserve to prolong its rate-hiking program, and that worry will also boost long-term rates.

We think today's 3.1% yield on the 10-year Treasury note will edge up to 3.2% by year-end and to 3.6% by the end of 2019. The bank prime rate that auto loans and home equity loans are based on will bump up from 5.25% to 6.25%

heading into 2020. The 30-year fixed-rate mortgage is likely to go up to 5.3%, and the 15-year fixed-rate mortgage should rise to 4.7%.

Higher interest rates will come to more savers. Big banks have been slower than small banks, online banks, and credit unions to reward savers, but their rates on money market accounts and CDs are likely to participate in the general upward move

(Source: Kiplinger's http://www.kiplinger.com/article/business/T019-C000-S010-interest-rate-forecast.html)

Industry Report - Industry Investment Chapter

The Campgrounds & RV Parks industry exhibits a moderate to high level of capital intensity. For every dollar spent on labor in 2017, an estimated $0.32 is spent on capital. Working capital costs are significant within the industry. Capital is needed for the construction and maintenance of buildings and facilities. Aside from necessities like bathrooms, many RV parks and campgrounds now offer facilities such as pools, tennis courts, outdoor dining areas and boating docks that must be maintained and upgraded. This new form of 'luxury camping' often referred to as "glamping" has kept capital intensity at a high level in the industry, during the five years to 2017.

Additional Insights for the Campgrounds & RV Parks Industry

IBIS World identifies 250 Key Success Factors for a business. The most important for the Campgrounds & RV Parks Industry are:

- Appropriate climatic conditions
- Access to multi-skilled and flexible workforce
- Membership of an industry organization

Subject Specific Analysis

The subject's vicinity, as evaluated for campground or recreational purposes, is rated as average to above. Occupancy has been trending downward for religious campgrounds based on fewer people being affiliated with a religious institution such as Methodist, Lutheran, Presbyterian or Catholic. The subject is currently in negotiations to potentially sell the camp to a land conservancy group. The campground is desirable due to its natural terrain, ponds and streams running through the site. Terrain is a mix of hilly to flat. The improvements are dated but in average condition. Customer base was primarily religious groups from the primary owner religious group. This camp is not being operated by the religious group due to the recent sale.

Subject Analysis

The subject property itself is characterized a campground of above average quality. Amenity levels are average. The campgrounds itself is spread over 338.52 acres of woods, streams, ponds, hills and level terrain. 97.63 acres are located in Franklin Township while 234.90 acres is located in Chester Township. The Franklin Township portion also has two community center buildings of 6,075 SF each. Streets and trails, in particular, are of average width and conducive for ease of traffic movement throughout the area. Most of the roads are not paved but are paths throughout the property. There are additional horse riding trails throughout the property. The subject is owned by a non-profit group and is not maximizing occupancy and/or potential net income.

Sales of campgrounds are rare. Most campground properties that do sell tend to be for profit and are run by families for generations. These tend to be based on the number of campsites or pad sites for daily, weekly or monthly campers. Some have additional tent camping areas and most tend to be near ponds, streams or lakes.

The Income Approach to Value was not developed due to the subject campground not being a profit driven operation. No financials were provided to the appraiser. Marketability overall is rated as above average considering the condition of the park, age, location, terrain, ponds, streams, utility extension for potential development and reasonable level of amenities. Following is a list of strengths and weaknesses:

Strengths:

- Above average amenities including former schoolhouse building
- Extensive utility extension throughout site
- Rolling Terrain with ponds, lakes and streams
- Positive location in Central Ohio in close proximity to major highways & roadways

Weaknesses:

- Expensive to maintain due to size (338.52 acres).
- Decline in campground attendance over the years for local, regional and national campground properties

The reasonably probable use of a property that results in the highest value. The four criteria the highest and best use must meet are legal permissibility, physical possibility, financial feasibility and maximum productivity.
(*Dictionary of Real Estate Appraisal, 6th Ed. Appraisal Institute, Chicago, ©2015).*

Implied in these definitions is that the determination of the highest and best use is shaped by the competitive forces within the market where the property is located. Therefore, the analysis and interpretation of the highest and best use is an economic study of market forces focused on the subject property.

Within this analysis we evaluated the subject sites highest and best use both as though vacant and as currently improved.

Highest and Best Use of Land as Though Vacant:
The Highest and Best Use of land or a site as though vacant assumes that a parcel of land is vacant or can be made vacant by demolishing any improvements. With this assumption, uses that create value in the marketplace can be identified, and the appraiser can begin to select comparable properties and estimate land value. Land as though vacant is a fundamental concept of valuation theory and the basis for the Cost Approach.

When land is already vacant, an appraiser values the land as is exists, i. e. , as vacant. When land is not vacant, however, the land's contribution to the value of the property as improved depends on how the land could optimally be used. Therefore, the highest and best use of the land as though vacant must be considered in relation to its current use and all potential alternative uses.

Legally Permissible

The first test concerns permitted uses. Private restrictions, zoning, building codes, historic district controls and environmental regulations govern the uses to which land can be put and those restrictions may preclude many potential land uses.

According to our understanding of the zoning noted earlier in this report, the site may be improved with structures that accommodate a variety of recreational uses, including the subject. Zoning is Special Use District by Chester Township and un-zoned by Franklin Township. There are no private restrictions, historic district control, or environmental regulations imposed on the properties that are not typical for the area. Building codes and zoning do not impair the subject property's use. No ground leases exist of which we are aware. According to our understanding of this zoning, the subject's site may be improved with a variety of parks, open space or recreational type applications.

Physically Possible

The second test is what is physically possible. The physical possibility of the vacant land are quickly constrained by factors such as site size, shape, frontage, availability of utilities and other support services, topography, soil composition and other site conditions and environmental factors.

The subject site size, 338.52 acres plus six acres for improvements, location, accessibility, and available infrastructure improvements allow for a variety of applications. Topography does not limit development of the site to a strong degree, although there are valleys and hills. A wide variety of recreational or agricultural applications are physically possible.

Financially Feasible

The third test concerns financial feasibility. Financial feasibility is defined as "the capability of a physically possible and legal use of a property to produce a positive return to the land after considering risk and all costs to create and maintain the use. Supply and demand, timing for specific development and use and pricing trends are all crucial elements of financial feasibility.

Uses that meet the test of physically possible and legally permissible were analyzed for their financial competitiveness with the subject's potential uses. Alternative use properties were analyzed as to their income potential. Vacancies and expenses were estimated, resulting in net operating incomes (cash flows). Rates of return were then calculated.

Speculative development of residential or commercial space is infeasible at this time because of the increasing costs of new construction and the lack of demand in the subject's area at this time. Consideration of the possible uses of the land lead to the conclusion that the only feasible use of the subject, as vacant, is potential park or recreational use. Intensive residential demand is not considered to be in place at this time.

Maximally Productive

The final test is for maximum productivity. Of the financially feasible uses of the land as though vacant, the highest and best use is the use that produces the highest residual land value, all else being equal. To achieve maximum productivity, a specific land use must yield the highest value of all the physically possible, legally permissible and financially feasible possible uses. Intensive residential demand is not considered to be in place at this time. There is demand for parkland or recreational use land at this time. Therefore, the maximally productive use would be for park type or recreational use.

Conclusion:

Upon full consideration of the attributes of the subject site it is believed that the subject highest and best use as vacant is for park type or recreational space. Demand is not in place for intense development at this time. Rental rates do not support new development at this time. The 338.52-acre site is adequate for many recreational uses. Therefore, the highest and best use is for recreational or park type space or hold for more intensive demand is in place.

Highest and Best Use as Improved

The concept of highest and best use of a property as improved pertains to the use that should be made of an improved property in light of the existing improvements and the ideal improvements.

There are two reasons to analyze the highest and best use of a property as improved. The first is to identify the use of the property that can be expected to produce the highest overall return for each dollar of capital invested. If, for example, a property is currently being used for a specific use, will this use continue to provide maximum benefits? Would the rate of return be increased by converting the property to another use, after considering renovation or demolition costs? The value of the property will differ under these two use assumptions, and the use providing the highest present value is the highest and best use as long as it is a legal or possible use.

The second reason to estimate the highest and best use of the property as improved is to help identify comparable properties. The highest and best use of land as though vacant and property as improved should be similar for each comparable property as for the subject property.

Legally Permissible

The first test concerns permitted uses. Private restrictions, zoning, building codes, historic district controls and environmental regulations govern the uses to which land can be put and those restrictions may preclude many potential land uses

According to our understanding of the zoning noted earlier in this report, the site may be improved with structures that accommodate a variety of uses, including the subject. There are no private restrictions, historic district control, or environmental regulations imposed on the property that are not typical for the area. Building codes and zoning do not impair the subject property's use. No ground leases exist of which we are aware. The subject's zoning is Special Use District (Chester Twp.) and Un-zoned (Franklin Twp.) and according to our understanding of this zoning, the subject's site may be improved with a campground facility like the subject. The subject is in compliance with zoning regulations and is therefore legally permissible. The subject is conforming to the neighborhood and is surrounded by complementary uses.

Physically Possible

The second test is what is physically possible. The physical possibility of the vacant land are quickly constrained by factors such as site size, shape, frontage, availability of utilities and other support services, topography, soil composition and other site conditions and environmental factors.

The subject site is 338.52 acres plus six acres for the two 6,075 SF Community center type buildings at the front of the property. In this case the subject is improved with a campground facility. Overall layout is functional and typical with no significant functional problems noted. The improvements are considered physically possible. Current development and layout makes good use of the site with most of the property available for future expansion if desired.

Financially Feasible

The third test concerns financial feasibility. Financial feasibility is defined as "the capability of a physically possible and legal use of a property to produce a positive return to the land after considering risk and all costs to create and maintain the use. Supply and demand, timing for specific development and use and pricing trends are all crucial elements of financial feasibility.

Uses that meet the test of physically possible and legally permissible were analyzed for their financial competitiveness with the subject's potential uses. Alternative use properties were analyzed as to their income potential. Vacancies and expenses were estimated, resulting in net operating incomes (cash flows). Rates of return were then calculated.

The subject's interim ongoing use is believed to be the most financially feasible use until an alternative use is warranted for the small improved area.

Maximally Productive

The final test is for maximum productivity. Of the financially feasible uses of the land as though vacant, the highest and best use is the use that produces the highest residual land value, all else being equal. To achieve maximum productivity, a specific land use must yield the highest value of all the physically possible, legally permissible and financially feasible possible uses.

The subject property is competitive with other alternative uses. No alternative use or conversion of the present use surpasses the income producing ability of the existing subject use, once accounting for conversion or razing costs as well as factoring elements of risk. Land use for this project is considered to be long-term for the economic life of the improvements. Therefore, the subject's current campground use is maximally productive.

Conclusion:

Upon full consideration of all the criteria of highest and best use analysis "as improved", it is believed that the subject's present use as a campground is its highest and best use. No evidence exists to support the potential alternative application of the subject to one of the allowed uses considering costs of razing present improvements. Therefore, the subject's present use as a campground or open park type space with the current schoolhouse building and community center buildings remains as the property's highest and best use as improved.

EXPOSURE TIME AND MARKETING PERIOD

The concept of exposure time is historical in nature and is presumed to have occurred prior to the effective date of the appraisal. Alternatively, marketing period occurs after the effective date of the appraisal and may or may not be directly related to the value presented.

The actual sale price could increase, decrease, or remain static during the marketing period depending upon market conditions and the type of property being appraised.

Since most investors' perceptions and estimates of marketing period are based largely on exposure times that they have recently encountered in similar transactions, it stands to reason that there should be some correlation between marketing periods and exposure times. In fact, in the absence of perceived changes in the market or other extenuating circumstances, marketing period and exposure time should be identical. That is to say, if all other things are held constant, a property that (retrospectively) required an exposure time of say one year should be expected to have a marking period (prospectively) also of one year.

Differences in the two concepts should appear when there is a perceived change in the market. To use the same example presented above, if a property required an exposure time of one year but perceived market conditions are improving, an appropriate estimate of marketing period could reasonably be expected to be less than one year. Conversely, if market conditions were anticipated to worsen, marketing period might exceed exposure time.

Objectively quantifying such differences would be virtually impossible; however, understanding the relationship between the two concepts and how they are affected by perceived changes in the market allows one to better estimate (subjectively) a reasonable period for exposure time and marketing period. This is especially important during periods when actual market evidence is limited by a lack of transactions. Extracting transaction-driven estimates can also be tenuous since many properties are often originally placed on the market at inflated asking prices. It is then necessary to decide if exposure time began when the property was first offered for sale or when the price was dropped to (or near) the ultimate sale price. Further complicating the issue is the question of whether exposure time ends when a sale contract is signed or whether it ends at the closing date of a sale.

Giving consideration to the physical design, quality and location of the subject, we estimate that a marketing period of twelve to twenty-four months is reasonably appropriate for the subject. Furthermore, it is our opinion that the exposure time commensurate with our estimates of value for the subject would be approximately twelve to twenty-four months.

Methodology- Campgrounds/Park Land (97.63 acres & 234.90 acres)

The subject is primarily vacant land with a small building on site. Both campgrounds and farm type properties were analyzed for pricing expectations for the subject on an as is basis. In the Sales Comparison Approach, the appraiser estimates the value of a property by comparing it with similar, recently sold properties in the surrounding or competing area when available. Inherent in this approach is the principle of substitution, which holds that when a property is replaceable in the market, its value tends to be set at the cost of acquiring an equally desirable substitute property with similar utility, assuming that no costly delay is encountered in making the substitution.

By analyzing sales that qualify as arms-length transactions between willing and knowledgeable buyers and sellers, we can identify market value and price trends. The sold properties should be as comparable to the subject in physical, locational, financial, and economic characteristics as possible.

The most widely-used and market-oriented units of comparison for properties such as the subject are the sales price per square foot or unit and gross income multiplier. All comparable sales were analyzed using price per square foot.

Sales were analyzed for:

(1) property rights conveyed such as leases etc. and other income characteristics including the following;
(2) financing terms which are above or below typical financing terms at the time of sale;
(3) condition of sale - atypical market conditions such as a family sale, special tax consideration, or other incentive;
(4) market conditions (time trending) - appreciation/depreciation due to changing supply and demand, or interest rate variances between the sale date and appraisal date;
(5) locational differences between the comparable and the subject property and its relative relationship between income potential, supply and demand, and desirability for the specific improved property type;
(6) physical characteristics such as class, quality, design, size, age, condition, desirability, utility, etc.
(7) other amenities different from the subject property.

On the following pages, are the individual sales, an adjustment grid and a summary of those properties we compared with the property appraised.

Normally matched paired analysis would be implemented to determine these adjustments; however, data was believed insufficient to allow normal application of this methodology. Those adjustments that were made were believed reasonable and fully representative of the pricing relationships as they correspond to the subject facility.

No sales were considered 100% comparable, but were chosen to provide the best mix of available property types similar to the subject to help assist us in reaching a value indication. The following sales were considered comparable to a reasonable degree to the subject property and will be adjusted accordingly.

LAND SALES MAP

TN
MN (8.1°W)

Scale 1 : 1,600,000
1" = 25.25 mi
Data Zoom 7-0

Land Sale No. 1

Property Identification

Record ID	3291
Property Type	Vacant Land, Agricultural
Address	3 Township Road 200, Centerburg, Morrow County, Ohio 43011
Tax ID	N35-001-00-032-03, N36-001-00-046-03

Sale Data

Grantor	Jamie Feick
Grantee	Catholic Youth Summer Camp Inc
Sale Date	March 30, 2015
Property Rights	Fee Simple
Conditions of Sale	Arms Length
Financing	Cash to Seller
Verification	Broker; Morrow County Auditor, Other sources: CoStar
Sale Price	$850,000
Cash Equivalent	$850,000

Land Data

Topography	Level
Utilities	Limited-electricity

Land Size Information

Gross Land Size	150.500 Acres or 6,555,780 SF

Indicators

Sale Price/Gross Acre	$5,648
Sale Price/Gross SF	$0.13

Remarks

Miscellaneous barns, silo, lean to's

Land Sale No. 2

Property Identification

Record ID	1594
Property Type	Vacant Land, Residential
Property Name	OI Retreat Center
Address	7107 Heywood Road, Castalia, Erie County, Ohio 44824
Tax ID	33-01124-001,33-01133-000

Sale Data

Grantor	OI Castalia STS INC
Grantee	William & Leslie Nestor
Sale Date	December 20, 2013
Property Rights	Fee Simple
Conditions of Sale	Arms Length, Auction
Financing	Cash to Seller
Verification	Erie County Auditor; Gordon Greene-Hanna Commercial Real Estate, 216-839-2005, Other sources: CoStar, Confirmed by Jane Libby
Sale Price	$1,000,000
Cash Equivalent	$1,000,000

Land Data

Topography	Level
Utilities	All

Land Size Information

Gross Land Size	224.820 Acres or 9,793,159 SF

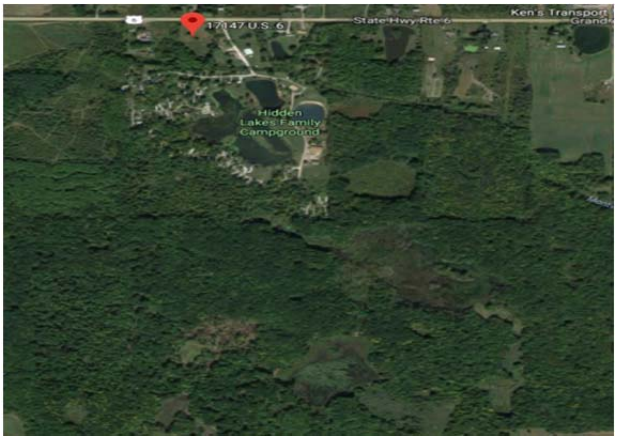
Indicators

Sale Price/Gross Acre	$4,448
Sale Price/Gross SF	$0.10

Remarks

3 houses, ponds, lodge, stables

Land Sale No. 3



Property Identification

Record ID	3061
Property Type	Vacant Land, Recreational
Property Name	Hidden Lakes Family Campground
Address	17147 Gar Highway, Montville, Geauga County, Ohio 44064
Tax ID	20-004600, 20-004500

Sale Data

Grantor	Steve and Harriet Kovach
Grantee	Hidden Lakes Family Campground
Sale Date	August 16, 2016
Property Rights	Fee Simple
Conditions of Sale	Arms Length
Financing	Cash to Seller
Verification	Broker; Geauga County Auditor, Other sources: CoStar
Sale Price	$874,000
Cash Equivalent	$874,000

Land Data

Zoning	R-1
Topography	Level
Utilities	All available

Land Size Information

Gross Land Size	71.000 Acres or 3,092,760 SF

Indicators

Sale Price/Gross Acre	$12,310
Sale Price/Gross SF	$0.28

Remarks

Showers, office, store, cabins, lakes, pool

Land Sale No. 4

Property Identification

Record ID	3066
Property Type	Vacant Land, Recreational
Property Name	Camp Myeerah
Address	7405 State Route 540, Bellefontaine, Logan County, Ohio 43311
Tax ID	120810000030000, 120810000029000, 120810000024000

Sale Data

Grantor	Appleseed Ridge Girl Scout Council
Grantee	Trust for Public Land
Sale Date	March 18, 2014
Property Rights	Fee Simple
Conditions of Sale	Arms Length
Financing	Cash to Seller
Verification	Owner; Logan County Auditor, Other sources: CoStar
Sale Price	$1,385,250
Cash Equivalent	$1,385,250

Land Data

Zoning	U-1, Rural Residential District
Topography	Level to rolling to steep
Utilities	All available

Land Size Information

Gross Land Size	348.000 Acres or 15,158,880 SF

Indicators

Sale Price/Gross Acre	$3,981
Sale Price/Gross SF	$0.09

Remarks

Total site size is 450 acres, however 102 acres is encumbered by a conservation easement.

Land Sale No. 5

Property Identification

Record ID	3063
Property Type	Vacant Land, Recreational
Property Name	Roundup Lake Campground
Address	3392 State Route 82, Mantua, Portage County, Ohio 44255
Tax ID	23-020-00-00-027-000, 23-020-00-00-025-000

Sale Data

Grantor	Wood Stone Mantua LLC
Grantee	DP 109 LLC
Sale Date	November 16, 2018
Property Rights	Fee Simple
Conditions of Sale	Arms Length
Financing	Cash to Seller
Verification	Broker; Portage County Auditor, Other sources: CoStar
Sale Price	$2,725,000
Cash Equivalent	$2,725,000

Land Data

Zoning	Commercial
Topography	Level
Utilities	Electric and water

Land Size Information

Gross Land Size	211.030 Acres or 9,192,467 SF

Indicators

Sale Price/Gross Acre	$12,913
Sale Price/Gross SF	$0.30

Remarks

425 site seasonal campground, office, store, cabins, 50 acre lake

7130 County Road 121, Fredericktown Ohio													
Sales Comparison Grid - As Is													
Item	**Subject**	**Sale #1**		**Sale #2**		**Sale #3**		**Sale #4**		**Sale # 5**	
	Presbyterian Church Camp	**Campground Land**		**OI Retreat Center**		**Hidden Lakes Family Campground**		**Camp Myeerah**		**Roundup Lake Campgrounds**	
	7130 County Road 121, Fredericktown Ohio	**3 Township Rd 200 Centerburg Ohio**		**7107 Heywood Road, Castalia Ohio**		**17147 Gar Highway Montville Ohio**		**7405 State Route 540, Bellefontaine Ohio**		**3392 State Route 82, Mantua Ohio**	
Sale Price	N / A	$850,000		$1,000,000		$874,000		$1,385,250		$2,725,000	
Unit Price per Pad	N / A	$5,648		$4,448		$12,310		$3,981		$12,913	
Property Rights	Fee Simple	Fee Simple		Fee Simple		Fee Simple		Fee Simple		Fee Simple	
Financing	N / A	Cash to Seller		Cash to Seller		Cash to Seller		Cash to Seller		Cash to Seller	
Conditions of Sale	N / A	Arms Length		Arms Length/Auction		Arms Length		Arms Length		Arms Length	
Market Conditions	Nov-18	Mar-15	**6%**	Dec-13	**10%**	Aug-16	**4%**	Mar-14	**9%**	Nov-18	**0%**
Subtotal Adjusted Unit Price		$5,987	**6%**	$4,893	**10%**	$12,802	**4%**	$4,339	**9%**	$12,913	**0%**
Location	Rural Chester & Franklin Township	Rural Centerburg		Rural Castalia		Rural Geauga County		Rural Bellefontaine		Rural Portage County	
Land Size (Acres)	97.63 Acres & 234.90 Acres	150.50		224.82		71.00	**-5%**	348.00	**5%**	211.03	
Utilities	Electric, Public Water & Sewer, Propane	Limited- Electricity	**15%**	Limited- Electricity	**15%**	Limited- Electricity	**15%**	Limited- Electricity	**15%**	Electric & Water	**10%**
Total SF	2,522 Multi Purpose Building	Miscellanous Barns, Silo, Lean to's		15,137	**-5%**	8,486		16,856	**-5%**	21,748	**-10%**
Year built/Condition	1995/ Average	N/A		1890-1936/ Average to above	**-5%**	Circa 1962/Average		N/A /Average		Circa 1940-1994/Average	
Amenities	Ponds, Streams	Stream	**5%**	3 Ponds		Lakes/Pool		Streams	**5%**	50 acre Lake	
Utility	Seasonal Campground	Campground Expansion Land		Corporate Retreat		200 Site Seasonal Campground		Girl Scout Seasonal		425 Site RV Seasonal Campground	**-5%**
Subtotal Adjustments			**20%**		**5%**		**10%**		**20%**		**-5%**
Adjusted Base Price		**$5,987**		**$4,893**		**$12,802**		**$4,339**		**$12,913**	
Indicated Unit Price		**$7,184**		**$5,138**		**$14,082**		**$5,207**		**$12,267**	

Average	**$8,776**
Indicated Per Acre	**$7,500**
Franklin Twp Land Value	**$732,195**
Rounded	**$730,000**
Chester Twp Land Value	**$1,761,750**
Rounded	**$1,760,000**

SUMMARY OF SALES – CAMPGROUNDS OR PARK LAND SALES

The campground or park type sales reviewed on the previous page are believed to provide a good cross section of unit pricing to be expected for the subject property. Sales were found to be Fee Simple property rights, Cash to Seller and arm's length negotiations. Sales were evaluated on a per acre basis. Adjustments were applied for improving market conditions since date of sale, for site size, for utility extension and for level of amenities or improvements on the site. Due to limited recent sales in the subject area, sales were from the Ohio region dating back to 2013. Most are campgrounds or land purchased for conservation purposes. Pricing before adjustments ranged from $3,981 to $12,913 per acre. The adjustments overall were believed to be reasonable.

Sale 1 is located at 3 Township Rd 200, Centerburg Ohio. This is a campground property located in Morrow County as well. This sale occurred in March 2015 so upward adjustment was applied for improving market conditions since date of sale. Other adjustments were also made for its inferior utility extension and inferior amenities on the site at purchase. Ultimately an adjusted unit value was indicated at $7,184per acre.

Sale 2 is located at 7107 Heywood Rd, Castalia, Ohio. This was an auction purchase of a partial corporate retreat (Owens Illinois) property adjacent to a trout stream. This retreat property is about 225 acres and included a lodge, several support buildings such as several single-family homes, barns, a pond and maintenance buildings. This sale occurred in December 2013 so upward adjustment was applied for improving market conditions since date of sale. Other adjustments were also made for its inferior utility extension and for its superior amount of improvements and year built/ condition Ultimately an adjusted unit value was indicated at $5,138 per acre.

Sale 3 is located at 17147 Gar Highway, Montville Ohio. This was a purchase of the Hidden Lakes Family Campground in August 2016 on 71 acres. Upward adjustment was applied for improving market conditions since date of sale. Other adjustments were also made for its smaller land size and for its inferior utility extension on the site at purchase. Ultimately an adjusted unit value was indicated at $14,082 per acre.

Sale 4 is located at 7405 State Route 540, Bellefontaine, Ohio. This was a purchase of the Camp Myeerah, a Girl Scout camp just outside of Bellefontaine. This was a purchase by the Trust for Public Land for conservation purposes. This sale occurred in March 2014 so upward adjustment was applied for improving market conditions since date of sale. Other adjustments were also made for its larger land size, inferior utility extension and for its larger improvements on site and amenities. Ultimately an adjusted unit value was indicated at $5,207 per acre.

Sale 5 is located at 3392 State Route 82, Mantua, Ohio. This is a recent purchase of Roundup Lake Campgrounds in Portage County. This is a recent sale (November 2018), so no adjustment is applied for improving market conditions. Adjustments were made for its superior utility extension and for its superior amount of improvements and superior utility when compared to the subject property. Ultimately an adjusted unit value was indicated at $12,267 per acre.

Conclusion

After application of all adjustments, the range of unit pricing is from $5,183 per acre to $14,082 per acre with an average of $8,776 per acre. While no comparable campground sales were found to be an exact duplication of the subject property, the sales are believed to sufficiently contain the traits of the subject so as to provide a reasonable value conclusion. Based on the subject's utility, wooded areas, ponds, streams and improvements, but noting its rural location and larger land size than most of the comparable sales, the price per acre value conclusion is appropriate at just below the average. Therefore, pricing at $7,500 per acre would be justified for both the Franklin Township portion and the Chester Township portion.

The following calculations for both Franklin Township and Chester Township will apply:

Franklin Twp. Land 97.63 acres x $7,500 per acre = $732,225

Franklin Twp. As Is Campground Value = $730,000 Rounded

Chester Twp. Land 234.90 acres x $7,500 per acre = $1,761,750

Chester Twp. As Is Campground Value = $1,760,000 Rounded

SALES COMPARISON APPROACH

Methodology – Community Center Buildings

In the Sales Comparison Approach, the appraiser estimates the value of a property by comparing it with similar, recently sold properties in the surrounding or competing area when available. Inherent in this approach is the principle of substitution, which holds that when a property is replaceable in the market, its value tends to be set at the cost of acquiring an equally desirable substitute property with similar utility, assuming that no costly delay is encountered in making the substitution.

By analyzing sales that qualify as arms-length transactions between willing and knowledgeable buyers and sellers, we can identify market value and price trends. The sold properties should be as comparable to the subject in physical, locational, financial, and economic characteristics as possible. The basic steps of this approach are:

(1) research recent, relevant property sales and current offerings throughout the competitive area; (2) select and analyze properties that are similar to the subject, giving consideration to the date of sale, any changes in economic conditions that may have occurred between the sale date and the date of value, and other physical, functional, or locational factors; (3) identify sales that include favorable financing and calculate the cash equivalent price; (4)reduce the sales price to a common unit of comparison such as price per square foot of building area etc.;(5) make appropriate adjustments to the prices of the comparable properties for differences; and (6) interpret the adjusted sales data and draw a logical value conclusion.

The most widely used and market-oriented units of comparison for properties such as the subject are the sales price per square foot or unit, and gross income multiplier. All comparable sales were analyzed using price per square foot.

Sales were analyzed for:

(1) property rights conveyed such as leases etc. and other income characteristics including the following;
(2) financing terms, which are above or below typical financing terms at the time of sale;
(3) condition of sale - atypical market conditions such as a family sale, special tax consideration, or other incentive;
(4) market conditions (time trending) - appreciation/depreciation due to inflation, deflation, changing supply and demand, or interest rate variances between the sale date and appraisal date;
(5) location differences between the comparable and the subject property, considering its overall area and then immediate location and its relative relationship between income potential, supply and demand, and desirability for the specific improved property type;

(6) physical characteristics such as class, quality, design, size, age, condition, desirability, utility, etc.

(7) other present or non-present amenities different from the subject property.

On the following pages are the individual sales and a summary of these properties we compared with the property appraised. No sales were considered 100% comparable but were chosen to provide the best mix of available property types similar to the subject to help assist us in reaching a value indication. The following sales were considered comparable to a reasonable degree to the subject property and will be adjusted accordingly.

IMPROVED SALES MAP

TN

MN (8.1°W)

Scale 1 : 1,600,000

1" = 25.25 mi

Data Zoom 7-0

Improved Sale No. 1

Property Identification

Record ID	4608
Property Type	Special Purpose, Meeting Hall
Address	677 E 11th Avenue, Columbus, Franklin County, Ohio 43211
Tax ID	010-043503
Market Type	Suburban

Sale Data

Grantor	Veterans of Foreign Wars
Grantee	NNEMAP, Inc
Sale Date	April 21, 2015
Property Rights	Fee Simple
Conditions of Sale	Arms Length
Financing	Cash to Seller
Verification	Shad Phipps-CBRE; 614-430-5015, Franklin County Auditor, Other sources: CoStar
Sale Price	$302,500
Cash Equivalent	$302,500

Land Data

Land Size	0.740 Acres or 32,234 SF
Zoning	M
Topography	Level
Utilities	All available

General Physical Data

Building Type	Single Tenant
Gross SF	5,500
Construction Type	Masonry
Stories	1
Year Built	1983
Parking	52 spaces

Indicators

Sale Price/Gross SF	$55.00
Floor Area Ratio	0.17
Land to Building Ratio	5.86:1

Improved Sale No. 2

Property Identification

Record ID	7566
Property Type	Special Purpose, Banquet/Meeting Hall
Address	5304 Fleet Ave, Cleveland, Cuyahoga County, Ohio 44105
Market Type	Urban

Sale Data

Grantor	JZDZ, LLC
Grantee	The Brentlinger Group
Sale Date	March 24, 2017
Property Rights	Fee Simple
Marketing Time	99 DOM
Conditions of Sale	Arms Length
Financing	Cash to Seller
Verification	Cuyahoga County Auditor ; July 19, 2018; Professionals Realty Shoreway Group, (216) 631-7767, Other sources: CoStar, Confirmed by Alan Mayse
Sale Price	$360,000
Cash Equivalent	$360,000

Land Data

Land Size	0.900 Acres or 39,204 SF
Zoning	GB, General Business
Topography	Level
Utilities	All

General Physical Data

Building Type	Single Tenant
Gross SF	7,000
Construction Type	Masonry
Stories	1
Year Built	1972
Parking	82 surface spaces

Indicators

Sale Price/Gross SF	$51.43
Floor Area Ratio	0.18
Land to Building Ratio	5.6:1

Improved Sale No. 3

Property Identification

Record ID	6310
Property Type	Special Purpose, Banquet/Meeting Hall
Address	619 Northwest Ave , Tallmadge, Summit County, Ohio 44278
MSA	Cleveland-Akron-Canton OH
Market Type	Suburban

Sale Data

Grantor	Yusef Khan Grotto 169
Sale Date	September 27, 2016
Property Rights	Fee Simple
Marketing Time	1120 DOM
Conditions of Sale	Arms Length
Financing	Cash to Seller
Verification	Howard Hanna Real Estate - Jim West; 330.686.1166, Summit County Auditor , Other sources: CoStar, Confirmed by Joe Zavac
Sale Price	$250,000
Cash Equivalent	$250,000

Land Data

Land Size	2.160 Acres or 94,090 SF
Topography	Level
Utilities	All

General Physical Data

Building Type	Single Tenant
Gross SF	3,376
Construction Type	Wood Frame
Stories	1
Year Built	1920 Updated 1985
Parking	30 surface spaces

Indicators

Sale Price/Gross SF	$74.05
Floor Area Ratio	0.04
Land to Building Ratio	27.87:1

Improved Sale No. 4

Property Identification

Record ID	5801
Property Type	Special Purpose, Lodge/Meeting Hall
Property Name	AMvets Inc Post 89
Address	3535 Westerville Rd, Columbus, Franklin County, Ohio 43224
Tax ID	010-252440
MSA	Columbus North / North Central
Market Type	Suburban

Sale Data

Grantor	Amvets Inc Post 89
Grantee	3535 Westerville LLC
Sale Date	September 10, 2015
Property Rights	Fee Simple
Marketing Time	708 DOM
Conditions of Sale	Arms Length
Financing	Cash to Seller
Mortgagee	Key Bank
Verification	Franklin County Auditor; Broker, Other sources: CoStar, Confirmed by Mike Tolson
Sale Price	$539,000 List Price $610,000
Cash Equivalent	$539,000

Land Data

Land Size	8.370 Acres or 364,597 SF
Topography	Level
Utilities	All

General Physical Data

Building Type	Single Tenant
Gross SF	9,554
Construction Type	Masonry
Stories	1
Year Built	1987

Indicators

Sale Price/Gross SF	$56.42
Floor Area Ratio	0.03
Land to Building Ratio	38.16:1

Morrow County Campground- Banquet Halls/Meeting Halls/Lodge Sales									
Item	**Subject**	**Sale #1**		**Sale #2**		**Sale #3**		**Sale #4**	
Address	**7130 County Road 121, Fredericktown Ohio**	**677 East 11th Avenue, Columbus Ohio**		**5304 Fleet Avenue, Cleveland Ohio**		**619 Northwest Avenue, Tallmadge Ohio**		**3535 Westerville Rd, Columbus Ohio**	
Sale Price		$302,500		$360,000		$250,000		$539,000	
Unit Price per Sq. Ft.		$55.00		$51.43		$74.05		$56.42	
Property Interest Appraised	**Fee Simple**	Fee Simple		Fee Simple		Fee Simple		Fee Simple	
Financing	**Cash to Seller**	Cash to Seller		Cash to Seller		Cash to Seller		Cash to Seller	
Conditions of Sale	**Arms Length**	Arms Length		Arms Length		Arms Length		Arms Length	
Market Conditions	**Nov-18**	Apr-15	**7%**	Mar-17	**3%**	Sep-16	4%	Sep-15	6%
Subtotal Adjusted Unit Price for Cumulative Adjustments		$58.85	**7%**	$52.97	**3%**	$77.01	**4%**	$59.81	**6%**
Location	**Fredericktown**	Columbus	-10%	Cleveland	-10%	Akron	-5%	Columbus	-10%
Quality / Design	**1 Story Frame/Wood**	1 story Masonry frame	-5%	1 Story frame/masonry	-5%	1 St Wood Frame		1 St Masonry Frame	-5%
Land Size (acres)	**6.00**	0.74		0.90		2.16		8.37	
Site Density	**21.51**	7.33	10%	5.60	10%	27.87		38.16	-10%
Building Size (Sq. Ft.)	**12,150**	5,500		7,000		3,376	-10%	9,554	10%
Age / Condition	**1996/ Average to Above Avg**	1983 / Average	15%	1972/Average	25%	1920/1985/ Average	15%	1987 / Average	10%
Visibility/Access	**Below Average**	Above Average	-10%	Average	-5%	Average	-5%	Average	-5%
Level of Amenities	**Typical**	Typical		Typical		Pool	-10%	Typical	
Utility	**Community Center for Campground**	Lodge/ Meeting Facility		Lodge/Meeting Hall		Banquet facility/ Meeting Hall		Banquet facility/ Meeting Hall	
Subtotal Adjustments			**0%**		**15%**		**-15%**		**-10%**
Adjusted Base Price		**$58.85**		**$52.97**		**$77.01**		**$59.81**	
Indicated Unit Price		**$58.85**		**$60.92**		**$65.46**		**$53.83**	

Average		$59.77
Median		$59.89
Choose		65.00
Result	$	789,750
Rounded	$	790,000

SALES COMPARISON APPROACH SUMMARY- BANQUET CENTERS/MEETING HALLS/LODGES

The search for comparable appraisal data spanned sales within four years of the appraisal date in Ohio and included searches of the MLS, CoStar and LoopNet. Four sales of similar size and utility were located in Central and Northeast Ohio. Furthermore, sales of this type of property are typically owner occupied and sales are typically privately negotiated transactions. All sales have been verified through individuals associated with the sale or multiple public data sources including sales disclosure forms and-or deeds. The sales are assumed arm's length and for real estate only.

The special use banquet center or meeting lodge type buildings reviewed and detailed on the previous pages are believed to provide an adequate cross section of unit pricing to be expected for the subject property which was used as a community center building for the camp. Sales were found to be fee simple property rights, cash to the seller and arm's length negotiations. The facilities reviewed compared favorably in regards to physical traits such as size, utility, quality, functional appeal and desirability. Due to the lack of similar facility sales within the greater Ohio Market area. Sales are from Columbus (2), Tallmadge and Cleveland and these sales were utilized for comparison. Additionally, due to a scarcity of comparable banquet facility sales, we have employed sales of other similar facilities whose utility is similar but different. Religious facilities, meeting and banquets halls, fraternal lodges, etc…all have similar utility and appeal and can have interchangeable users. Market pricing varies greatly with comparable pricing having a range of $51.43 to $74.05 per square foot. Adjustments were applied for improving market conditions, location, quality/design, site density, building size, age/condition, amenities and visibility. Market indicators support increasing market conditions adjustments from the sales date for all of the sales.

Sale #1 located at 677 East 11th Ave, Columbus is an April 2015 sale of a lodge/meeting hall. This is an arm's length sale between knowledgeable buyer and seller. Adjustments are applied for improving market conditions, superior location, superior quality/design, smaller site density, older age/condition and superior visibility as the subject is located away from the street. The indicated unit rate is $58.85 after 0% net adjustment.

Sale #2 located at 5304 Fleet Avenue, Cleveland sold in March 2017. This is an arm's length sale between knowledgeable buyer and seller. This property is adjusted for improving market conditions since date of sale, for its superior location, superior quality/design, smaller site density, older age/condition and superior visibility as the subject is located away from the street. The indicated unit rate is $60.92/SF after adjustment.

Sale #3 located at 619 Northwest Avenue, Tallmadge Ohio transferred in September 2016. This is an arm's length sale between knowledgeable buyer and seller. This property is adjusted for improving market conditions since date of sale, for its superior location, smaller site density, smaller building size, older age/condition, superior visibility as the subject is located away from the street and superior level of amenities as this property includes a pool. The indicated unit rate is $65.46/SF.

Sale #4 located at 3535 Westerville Road, Columbus, Ohio sold in September 2015. This is an arm's length sale between knowledgeable buyer and seller. This property is adjusted for improving market conditions since date of sale, for its superior location, superior quality/design, larger site density, larger building size, older age/condition and superior visibility as the subject is located away from the street. The indicated unit rate is $53.83/SF.

Conclusion

The subject is a collection of two banquet hall/meeting buildings in average to above average condition. Locational attributes are below average when compared to the sales presented. The subject buildings are the newest buildings when compared to the comparable sales. Overall marketability is average to above average.

After application of adjustments, the range of unit value is from $53.83 to $65.46/SF with a mean of $59.77SF and a median of $59.89/SF. A unit value of $65 per square foot is believed appropriate for the subject's market value based on the subject's average to above average condition for each of the two subject buildings. While no comparable building sales were found to be an exact duplication of the subject property, the sales are believed to sufficiently contain the traits of the subject to provide a reasonable value conclusion.

The following calculations will apply:
6,075 SF Each building or 12,150 SF total
Franklin Township- 12,150 SF x $65.00/SF = $789.750

Value Conclusion via Sales Comparison Approach, Rounded $790,000 (Franklin Township Real Estate)

V. RECONCILIATION AND FINAL VALUE OPINION

As Is

COST APPROACH: As Is.....Not Developed

SALES COMPARISON APPROACH:

FRANKLIN TOWNSHIP LAND $730,000

FRANKLIN TWP 2 COMMUNITY CENTERS ON 6 ACRES:.....$790,000

CHESTER TOWNSHIP LAND.....$1,760,000

TIMBER VALUE (FROM 3rd PARTY TIMBER EXPERT): $460,000

TOTAL PROPERTY:.....$3,740,000

INCOME APPROACH: .....Not Developed

The property being appraised is a campground used by a religious group over the past sixty to seventy years. . It had been a church-based youth camp but is primarily vacant as of the appraisal date. The subject has good potential for continued recreational use or park land type use The subject is a possible sale to a land conservancy group who would continue the use of the property as a recreation or park type property. Overall appeal and layout of the subject park is above average due to numerous lakes, ponds, streams and rolling terrain.

This appraiser has no present or future interest in the subject property and neither engagement nor compensation for this report was in any way contingent upon the value reported.

Based on the analysis presented in this report, it is my opinion that the Market Value of the Fee Simple Interest in the subject property, as is, as of November 7, 2018, was:

Timber Value (from 3rd Party) -	**$460,000**
Franklin Township 2 Campground Community Centers-	**$790,000**
Franklin County Land- 97.63 Acres	**$730,000**
Chester Township- 234.90 Acres Land-	**$1,760,000**
Total Property-	**$3,740,000**

Three Million Seven Hundred Forty Thousand Dollars

This valuation is for 100% real estate.

Implicit within this valuation is an exposure time of twelve to twenty-four months, believed reasonable for this type of property.

VI. ADDENDA

1250 Old River Rd.
Suite 202
Cleveland, OH
44113

October 29, 2018

Joseph Zavac
The William Fall Group
300 Madison Ave. Suite 900
Toledo, Ohio 43604

RE: +/- 310.525 acres in Morrow County at 7130 County Road 121, Fredericktown, OH 43019

Dear Mr. Zavac:

The Trust for Public Land ("TPL") is pleased to submit to you this letter of engagement. It outlines the terms and conditions under which The William Fall Group ("Contractor") is directed to complete an appraisal of the Property, as defined below. Your analysis should be presented in narrative format. The purpose of the appraisal is to establish the market value of the Property together with improvements of contributory value, if any. The estate to be appraised is Fee Simple Title.

The subject property is approximately +/- 310.525 acres located at 7130 County Road 121, Fredericktown, OH 43019, and consisting of all of Morrow County PPN numbers: D10-001-00-228-02 (217.175 acres), D10-001-00-228-01 (17.72 acres), F14-001-00-055-08 (75.63 acres); (the "Property").

Appraiser represents that they are currently pre-qualified by the Ohio Department of Transportation to perform appraisal services. The appraisal is to be performed in accordance with the Uniform Standards of Professional Appraisal Practice. Appraiser is required to include a copy of this signed letter within the appraisal addenda.

The fee for this assignment shall be fixed at **$2,900.00,** inclusive of expenses. Payment in full will be made by TPL subject to receipt of an invoice from you following completion of this appraisal assignment. Appraiser will provide a verbal finding of value by November 29, 2018. A final appraisal report in electronic .pdf format will be provided within 7 days of receipt of any TPL comments. Appraiser understands that time is of the essence. Appraiser further understands that the intended user of the appraisal is The Trust for Public Land and Morrow County Park District, and both shall be named in the "Prepared For:" statement.

You may contact me at 216.401.8072 if you need further information regarding this assignment. Please address the report and send the original invoice to the undersigned.

Please have The William Fall Group indicate its acceptance of this engagement by a signature in the space provided at the bottom of this letter and return a copy to me. Thereafter, you should contact the landowner's representative, Andy Matyac, at (740) 403-4847, to set an appointment to visit the Property and to expedite the data collection process from the property contact.

Sincerely,

Dave Vasarhelyi, Sr. Project Manager

Reviewed and accepted this 29 day of Oct, 2018.

The William Fall Group.

By: _____

Its: _____

WORK AGREEMENT ADDENDUM

This Addendum (the "Addendum") to the Proposal to perform an appraisal for the Morrow Camp Property dated October 29, 2018 (the "Proposal") is between The Trust for Public Land ("TPL") and The William Fall Group ("CONTRACTOR") The Addendum and Proposal hereinafter collectively referred to as "Contract". TPL and CONTRACTOR agree that:

1. The total not to exceed fee of $2,900.00 is inclusive of all expenses. CONTRACTOR will provide an invoice upon completion of each service. Undisputed amounts will be paid within 30 days of TPL's receipt of invoice.

2. Reference to the Morrow Camp Property is to the +/- 310.525 acre property located in Morrow County, Ohio and identified on the attached description and map.

3. CONTRACTOR will maintain any current license or certification required by law, and shall conform with all legal requirements applicable to persons rendering the same or similar services in effect during the course of rendering services to TPL. CONTRACTOR will also maintain in force while rendering services under any contract or invoice with TPL, any business license which may be required by local governmental entities for persons rendering the same or similar services as those rendered by CONTRACTOR for or on behalf of TPL.

4. CONTRACTOR will indemnify and hold TPL harmless from any and all demands, claims, causes of action, suits, proceedings, arbitrations, judgements, losses, liabilities, costs, expenses and fees, including but not limited to reasonable attorneys' fees, which arise from or in connection with the services provided by CONTRACTOR and/or the negligence or intentional acts of CONTRACTOR.

5. This Contract will be administered by the following representative of TPL: Dave Vasarhelyi, provided that TPL reserves the right to change such person at any time.

6. CONTRACTOR shall, during the term of this Contract, maintain the following insurance coverage:

Professional Errors and Omissions Liability	$1,000,000/occurrence $1,000,000/aggregate

All policies shall be written by insurance companies with an A.M. Best's rating of A:VI or higher. All insurance is required to be in place prior to commencement of any work under the Contract. All claims made policies shall have prior acts inclusion dating at least prior to the commencement of work under the Contract and shall remain in force for at least 5 years after the Contract, or the work performed under the Contract terminates.

Prior to commencement of the services, CONTRACTOR shall furnish to TPL a copy of the foregoing policies of insurance or a certificate of insurance showing the amounts of coverage set forth above. For each such policy of insurance maintained by CONTRACTOR pursuant to this paragraph 7 (except the workers' compensation and professional errors and omissions policies) the insurer shall name TPL and its officers, directors and employees as an additional insured, provide TPL with an endorsement and certificate of insurance evidencing the same, and shall state that the insurer shall give at least thirty (30) days' notice to TPL prior to cancellation, expiration or modification thereof. This Contract specifically requires that CONTRACTOR's insurance be primary and noncontributing to TPL's own coverage, and that CONTRACTOR will notify its insurer of this provision.

7. W-9 Form. Concurrent with the delivery of this Contract, CONTRACTOR will complete and return to TPL an IRS form W-9, unless such W-9 is already on file and CONTRACTOR's legal reporting status has not changed.

8. If there is a conflict between the terms of the Proposal and this Addendum, this Addendum will prevail.

THE TRUST FOR PUBLIC LAND

By: David Vasarhelyi

Its: Sr. Project Manager

The William Fall Group

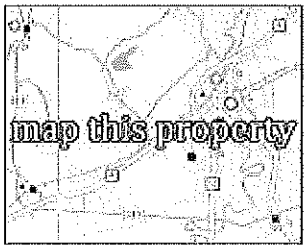
By: Joseph Zaver

Its: SVP

Data For Parcel F14-001-00-056-01

Base Data

Parcel:	F14-001-00-056-01
Owner:	JBH INVESTMENTS LLC
Address:	7130 CO 121 RD



Tax Mailing Address

Tax Mailing Name:	JBH INVESTMENTS LLC
Address:	758 W UNION ST
City State Zip:	ATHENS OH 45701

Owner Address

Owner Name:	JBH INVESTMENTS LLC
Address:	7130 CO 121 RD
City State Zip:	FREDERICKTOWN OH 43019

Geographic

City:	UNINCORPORATED
Township:	FRANKLIN TOWNSHIP
School District:	HIGHLAND LSD

Legal

Legal Acres:	27.996	**Homestead Reduction:**	NO
Legal Description:	TWP LOT 24 FAIRHAVEN & SILVERWOOD COTTAGESRTS:1S0804	**2.5% Reduction**	NO
Land Use:	499 - OTHER COMMERCIAL STRUCTURES	**Foreclosure:**	NO
Neighborhood:	00900	**Board of Revision:**	NO
Number Of Cards:	1	**New Construction:**	NO
Annual Tax (Does not include delinquencies.):	$19,836.70	**Divided Property:**	NO
Map Number:		**Routing Number:**	SE

Notes

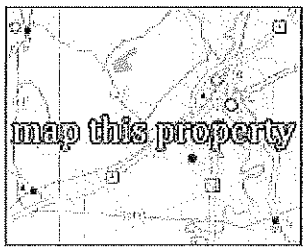
Notes:	DEED NUMBER: 941/S0
	ZONING:
	TAX LIEN: NO

Report Discrepancy

The CAMA data presented on this website is current as of 6/27/2019 12:01:50 AM.

Data For Parcel F14-001-00-056-01

Land Data



Parcel:	F14-001-00-056-01
Owner:	JBH INVESTMENTS LLC
Address:	7130 CO 121 RD

Land

Land Type	Calculated Acres	Actual Frontage	Effective Frontage	Depth	Depth Factor	Base Rate	Unit Rate	Adjusted Rate	Appraised Value (100%)
A0 - Row	0.019	0	0	0	0%	0	0	0	$0.00
A7 - Pasture	6.677	0	0	0	0%	4500	4500	4500	$24,040.00
A8 - Woodland	19.3	0	0	0	0%	4500	4500	4500	$69,480.00
A1 - Primary Site	2	0	0	0	0%	14000	14000	14000	$28,000.00

Land Totals

Deeded Acres:	27.996
Total Calculated Acres:	27.996
Total Value:	$121,520.00

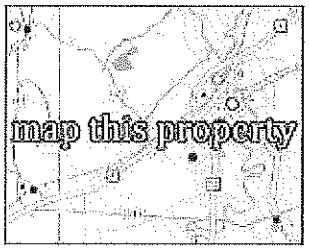
Report Discrepancy

The CAMA data presented on this website is current as of 6/27/2019 12:01:50 AM.

Data For Parcel F14-001-00-056-01

Sales Data

Parcel: F14-001-00-056-01
Owner: JBH INVESTMENTS LLC
Address: 7130 CO 121 RD



Sales

Sale Date	Sale Price	Seller	Buyer	No. Of Properties	Valid Sale	Land Only Sale	Deed Type	Conveyance Number
2/14/2019	$1,600,000.00	BUCKHORN CHILDRENS CENTER/ PRESBYTERIAN CHILD WELFARE AGENCY OF BUCKHORN KENTUCKY	JBH INVESTMENTS LLC	6	YES	N	WD-WARRANTY DEED	96
10/25/2017	$0.00	BUCKHORN CHILDRENS CENTER	BUCKHORN CHILDRENS CENTER/ PRESBYTERIAN CHILD WELFARE AGENCY OF BUCKHORN KENTUCKY	4	NO	N	QE-QUIT CLAIM DEED EXEMPT	

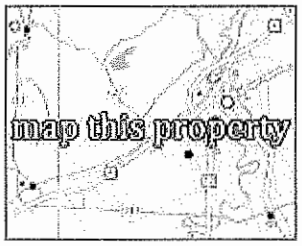
Report Discrepancy

The CAMA data presented on this website is current as of 6/27/2019 12:01:50 AM.

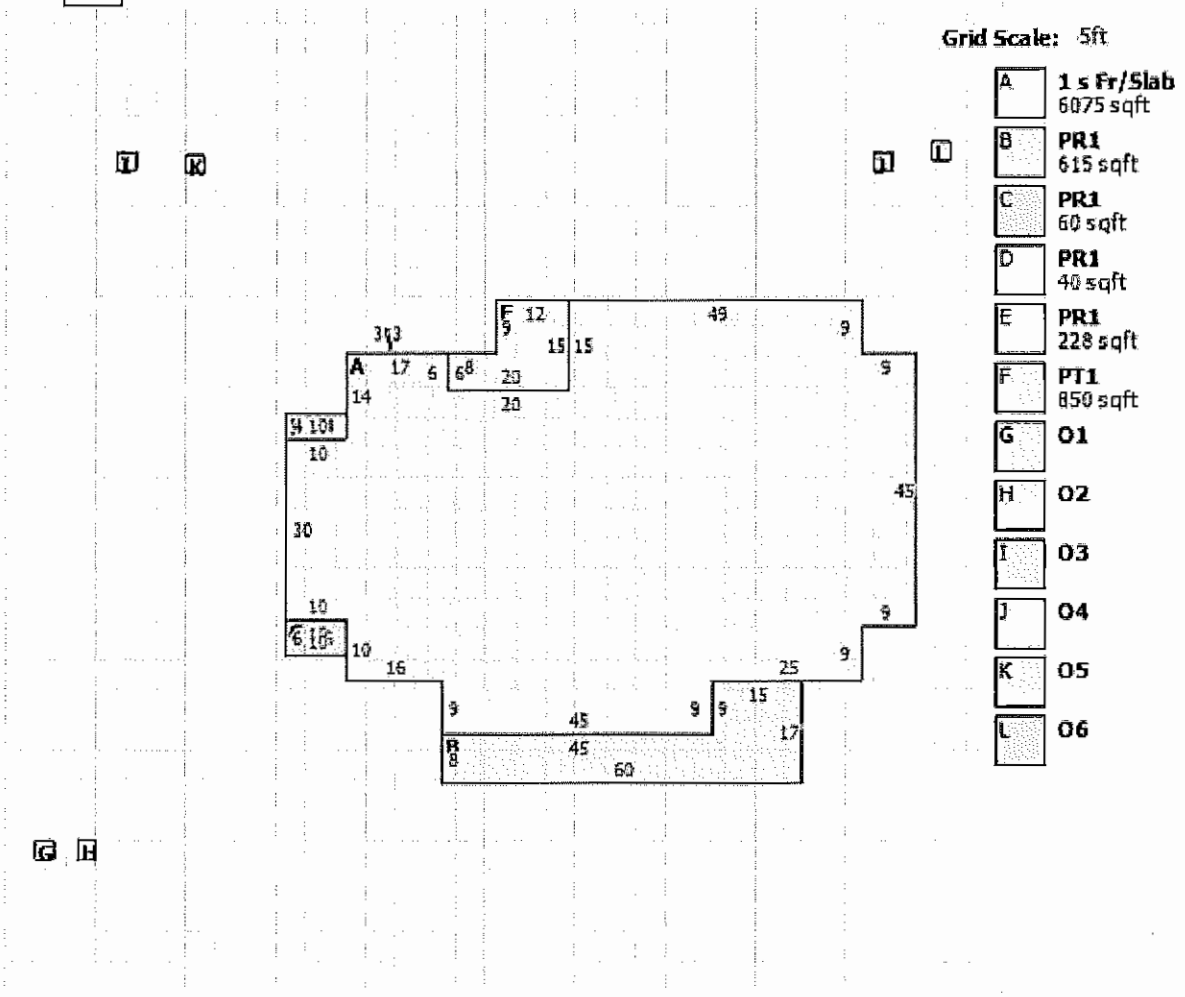
Data For Parcel F14-001-00-056-01

Sketch Data

Parcel:	F14-001-00-056-01
Owner:	JBH INVESTMENTS LLC
Address:	7130 CO 121 RD



Sketch
Card: 1



Sketch Labels

A	ATTIC
AA	ATTIC ADDITION
AFCP	ATTACHED FRAME CARPORT
AFG	ATTACHED FRAME GARAGE
AFGFQ	ATTACHED FRAME GARAGE WITH FULL QUARTERS
B	BASEMENT
BA	BASEMENT ADDITION

BSG	BASEMENT GARAGE
EFP	ENCLOSED FRAME PORCH
FQ	FULL LIVING QUARTERS
HQ	WITH HALF LIVING QUARTERS
MSDK	MASONRY DECK
O	OUTBUILDING
OFP	OPEN FRAME PORCH
OMP	OPEN MASONRY PORCH
OPMF	OPEN PATIO MASONRY FLOORING
SBRA	STORY BRICK ADDITION
SFP	SCREEN FRAME PORCH
SFRA	STORY FRAME ADDITION
WDDK	WOOD DECK

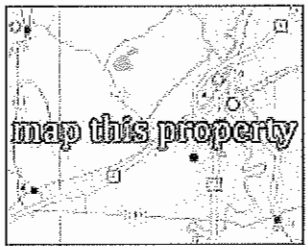
Report Discrepancy

The CAMA data presented on this website is current as of 6/27/2019 12:01:50 AM.

Data For Parcel F14-001-00-056-01

Tax values are from tax year 2018 payable 2019.

Tax Data



Parcel:	F14-001-00-056-01
Owner:	JBH INVESTMENTS LLC
Address:	7130 CO 121 RD

Tax Rates

Full Tax Rate	49.8
Effective Tax Rate	48.064943

Property Tax

Tax Year 2018 Payable 2019

	Delinquency	Adjust	First Half	Adjust	Second Half	Adjust	Total
Charge:	$19,443.34	$0.00	$9,999.84	$0.00	$9,999.84	$0.00	
Credit:			($348.40)	$0.00	($348.40)	$0.00	
Rollback:			$0.00	$0.00	$0.00	$0.00	
Reduction:			$0.00	$0.00	$0.00	$0.00	
Homestead:			$0.00	$0.00	$0.00	$0.00	
Sales Credit:			$0.00	$0.00	$0.00	$0.00	
Net Tax:	$19,443.34		$9,651.44		$9,651.44		
CAUV Recoupment:	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	
Special Assessments:	$28.88		$26.25		$25.00		
Penalty/Interest:	$3,013.73	$0.00	$0.00	$482.57	$0.00	$0.00	
Net Owed:	$22,485.95		$10,160.26		$9,676.44		$42,322.65
Net Paid:	($22,485.95)		($10,160.26)		($9,676.44)		($42,322.65)
Net Due:	$0.00		$0.00		$0.00		$0.00

Special Assessments

Assessment: 1 **of 1**

10-911 911

	Delinquency	Adjust	First Half	Adjust	Second Half	Adjust
Charge:	$25.00	$0.00	$25.00	$0.00	$25.00	$0.00
Penalty/Interest:	$7.76	$0.00	$0.00	$1.25	$0.00	$0.00
Net Special Assessments:	$28.88		$26.25		$25.00	

Payment History

Cycle	Prior Paid	Receipt Number

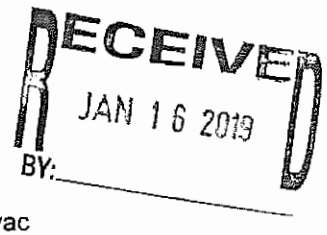
Payment Date			First Half Paid	Second Half Paid	Surplus Paid	
2/15/2019	2-18	$0.00	$9,651.44	$0.00	$0.00	ctr022119-02212019-46-12
2/15/2019	2-18	$0.00	$0.00	$9,651.44	$0.00	ctr022119-02212019-46-12
2/15/2019	2-18	$0.00	$482.57	$0.00	$0.00	ctr022119-02212019-46-12
2/15/2019	2-18	$3,013.73	$0.00	$0.00	$0.00	ctr022119-02212019-46-12
2/15/2019	2-18	$12,468.34	$0.00	$0.00	$0.00	ctr022119-02212019-46-12
2/15/2019	2-18	$3.88	$0.00	$0.00	$0.00	ctr022119-02212019-46-12
2/15/2019	2-18	$0.00	$1.25	$0.00	$0.00	ctr022119-02212019-46-12
2/15/2019	2-18	$0.00	$0.00	$25.00	$0.00	ctr022119-02212019-46-12
2/15/2019	2-18	$0.00	$25.00	$0.00	$0.00	ctr022119-02212019-46-12
1/30/2019	1-18	$3,500.00	$0.00	$0.00	$0.00	ctr013019-01302019-37-1
1/3/2019	1-18	$25.00	$0.00	$0.00	$0.00	ctr010319-01032019-10-1
1/3/2019	1-18	$3,475.00	$0.00	$0.00	$0.00	ctr010319-01032019-10-1
3/5/2018	2-17	$226.58	$0.00	$0.00	$0.00	ctr030518A-03052018-101-1
3/5/2018	2-17	$2,226.84	$0.00	$0.00	$0.00	ctr030518A-03052018-101-1
3/5/2018	2-17	$1.25	$0.00	$0.00	$0.00	ctr030518A-03052018-101-1
12/18/2017	1-17	$4,293.05	$0.00	$0.00	$0.00	ctr121817-12182017-18-1
11/20/2017	1-17	$3,863.35	$0.00	$0.00	$0.00	ctr112017-11202017-19-5
10/16/2017	1-17	$3,474.55	$0.00	$0.00	$0.00	ctr101617-10162017-46-1
9/18/2017	1-17	$1,165.91	$0.00	$0.00	$0.00	ctr091817-09182017-46-1
9/18/2017	1-17	$2,308.64	$0.00	$0.00	$0.00	ctr091817-09182017-46-1
8/21/2017	1-17	$3,474.55	$0.00	$0.00	$0.00	ctr082117-08212017-11-1
7/18/2017	1-17	$11,659.06	$0.00	$0.00	$0.00	ctr071817-07182017-40-5
7/18/2017	1-17	$12.50	$0.00	$0.00	$0.00	ctr071817-07182017-40-5
6/19/2017	2-16	$3,474.55	$0.00	$0.00	$0.00	ctr061917-06192017-50-1
6/15/2017	2-16	$3,474.55	$0.00	$0.00	$0.00	scan061517-06152017-64-1
6/15/2017	2-16	$0.00	$0.00	$0.00	$0.00	scan061517-06152017-64-1
6/15/2017	2-16	$0.00	$0.00	$0.00	$0.00	scan061517-06152017-64-1
6/15/2017	2-16	$0.00	$0.00	$0.00	$0.00	scan061517-06152017-64-1

4/17/2017	2-16	$3,474.55	$0.00	$0.00	$0.00	ctr041717-04172017-42-1
3/20/2017	2-16	$3,474.55	$0.00	$0.00	$0.00	ctr032017-03202017-30-1
2/7/2017	1-16	$0.00	$12.50	$0.00	$0.00	scan020717-02072017-1035-1
2/7/2017	1-16	$0.00	$11,659.06	$0.00	$0.00	scan020717-02072017-1035-1
1/20/2017	1-16	$3,474.55	$0.00	$0.00	$0.00	SCAN012017-01202017-202-1
12/19/2016	1-16	$3,474.55	$0.00	$0.00	$0.00	ctr121916-12192016-19-1
11/18/2016	1-16	$626.52	$0.00	$0.00	$0.00	ctr111816-11182016-23-1
11/18/2016	1-16	$628.11	$0.00	$0.00	$0.00	ctr111816-11182016-23-1
11/18/2016	1-16	$2,217.42	$0.00	$0.00	$0.00	ctr111816-11182016-23-1
10/17/2016	1-16	$3,474.55	$0.00	$0.00	$0.00	ctr101716-10172016-58-1
9/19/2016	1-16	$1,127.68	$0.00	$0.00	$0.00	ctr091916-09192016-31-2
9/19/2016	1-16	$3,474.55	$0.00	$0.00	$0.00	ctr091916-09192016-31-2
8/15/2016	1-16	$2,029.26	$0.00	$0.00	$0.00	ctr081516-08152016-37-1
8/15/2016	1-16	$0.14	$0.00	$0.00	$0.00	ctr081516-08152016-37-1
8/15/2016	1-16	$9.01	$0.00	$0.00	$0.00	ctr081516-08152016-37-1
8/15/2016	1-16	$0.03	$0.00	$0.00	$0.00	ctr081516-08152016-37-1
8/15/2016	1-16	$24.77	$0.00	$0.00	$0.00	ctr081516-08152016-37-1
8/15/2016	1-16	$1.56	$0.00	$0.00	$0.00	ctr081516-08152016-37-1
8/15/2016	1-16	$1,284.54	$0.00	$0.00	$0.00	ctr081516-08152016-37-1
8/15/2016	1-16	$122.74	$0.00	$0.00	$0.00	ctr081516-08152016-37-1
7/14/2016	1-16	$11,016.30	$0.00	$0.00	$0.00	ctr071416-07142016-23-5
7/14/2016	1-16	$12.50	$0.00	$0.00	$0.00	ctr071416-07142016-23-5
6/14/2016	2-15	$0.00	$0.00	$0.00	$0.00	scan061416-06142016-112-1
6/14/2016	2-15	$3,474.55	$0.00	$0.00	$0.00	scan061416-06142016-112-1
6/14/2016	2-15	$0.00	$0.00	$0.00	$0.00	scan061416-06142016-112-1
6/14/2016	2-15	$0.00	$0.00	$0.00	$0.00	scan061416-06142016-112-1
6/14/2016	2-15	$0.00	$0.00	$0.00	$0.00	scan061416-06142016-112-1
6/14/2016	2-15	$0.00	$0.00	$0.00	$0.00	scan061416-06142016-112-1
6/14/2016	2-15	$0.00	$0.00	$0.00	$0.00	

						scan061416-06142016-112-1
6/14/2016	2-15	$0.00	$0.00	$0.00	$0.00	scan061416-06142016-112-1
6/14/2016	2-15	$0.00	$0.00	$0.00	$0.00	scan061416-06142016-112-1
6/14/2016	2-15	$0.00	$0.00	$0.00	$0.00	scan061416-06142016-112-1
6/14/2016	2-15	$0.00	$0.00	$0.00	$0.00	scan061416-06142016-112-1
6/14/2016	2-15	$0.00	$0.00	$0.00	$0.00	scan061416-06142016-112-1
5/17/2016	2-15	$1,550.53	$0.00	$0.00	$0.00	ctr051716-05172016-6-2
5/17/2016	2-15	$12.50	$0.00	$0.00	$0.00	ctr051716-05172016-6-2
2/12/2016	1-15	$0.00	$11,016.30	$0.00	$0.00	ctr021716-02172016-37-1
2/12/2016	1-15	$0.00	$12.50	$0.00	$0.00	ctr021716-02172016-37-1

Report Discrepancy

The CAMA data presented on this website is current as of 6/27/2019 12:01:50 AM.



Joseph A Zavac
300 Madison Ave Ste 900
Toledo, OH 43604-1595

STATE OF OHIO
DIVISION OF REAL ESTATE
AND PROFESSIONAL LICENSING

AN APPRAISER LICENSE/CERTIFICATE
has been issued under ORC Chapter 4763 to:

NAME: Joseph A Zavac
LIC/CERT NUMBER: 2001021272
LIC LEVEL: Certified General Real Estate Appraiser
CURRENT ISSUE DATE: 01/11/2019
EXPIRATION DATE: 03/12/2020
USPAP DUE DATE: 03/12/2020

The William Fall Group
300 Madison Avenue, Suite 900
Toledo, Ohio 43604
jzavac@williamfallgroup.com

JOSEPH A. ZAVAC MAI

PROFESSIONAL EXPERIENCE

- 2002 - Present The William Fall Group (formerly LandAmerica OneStop) - Senior Vice President, Commercial Services & Department Manager
- 2001 - 2002 LandAmerica OneStop (formerly Primis, Inc.)
- 1999 - 2001 Primis, Inc. (formerly The William Fall Group)
- 1998 - 1999 The William Fall Group

ACADEMIC BACKGROUND

- 1992 The University of Toledo - Master of Business Administration, Finance
- 1989 The University of Toledo - Bachelor of Business Administration, Finance

CERTIFICATION / LICENSING

- State of Ohio Certified General Real Estate Appraiser - License/Certificate No. 2001021272
- State of Michigan Certified General Appraiser - Permanent Identification No. 1201069365
- State of Indiana Certified General Appraiser - License No. CG41001320
- State of Illinois Certified General Real Estate Appraiser - License No. 553.002046
- State of Georgia Certified General Real Property Appraiser - License 359826

PROFESSIONAL ASSOCIATIONS

- Appraisal Institute MAI Designation
- Appraisal Institute Ohio Chapter President 2017

COMMUNITY ASSOCIATIONS

- Manor House Low-Income Catholic Housing Facility - Treasurer, Board of Directors
- Toledo Rotary Member
- University of Toledo Alumni Association- President's Club, Former Alumni Board of Trustees

COURSES / SEMINARS

- 2017 Appraisal Institute- USPAP Update (2018-19)
- 2017 40th Annual Seminar- Ohio Chapter
- 2017 Professional Practice & Ethics
- 2017 Appraisal Institute- Yellow Book (Standards / Federal Land Acquisitions

- 2017 Appraisal Institute- IRS Mock Trial Seminar
- 2016 Appraisal Institute - USPAP Update (2016-17)
- 2016 Appraisal Institute- Forecasting Revenue
- 2016 Appraisal Institute- 39th Annual Seminar- Ohio Chapter
- 2015 Appraisal Institute - Yellow Book (Standards /Federal Land Acquisitions
- 2014 Appraisal Institute - Comprehensive Guide to Subdivision Valuation
- 2014 Appraisal Institute - USPAP Update (2014-15)
- 2013 Appraisal Institute - USPAP Update (2012-13)
- 2013 Appraisal Institute - Professional Ethics Standards
- 2012 Appraisal Institute - International Financial Reporting Standards for the Real Estate Appraiser
- 2011 Appraisal Institute - Fundamentals of Separating Real, Personal Property & Intangible Business Assets
- 2011 Appraisal Institute - Advanced Spreadsheet Modeling
- 2010 Appraisal Institute - USPAP Update (2010-11)
- 2010 Appraisal Institute - Intro to Valuing Commercial Green Buildings
- 2010 Appraisal Institute - Yellow Book (Standards /Federal Land Acquisitions)
- 2008 Appraisal Institute - Professional Ethics & Standards
- 2008 Appraisal Institute - USPAP Update (2008-2009)
- 2008 Appraisal Institute/ASA - Conservation Easements
- 2007 Appraisal Institute - Demonstration Report Writing
- 2007 Appraisal Institute - Yellow Book (Standards/ Federal Land Acquisitions)
- 2006 Appraisal Institute - USPAP Update (2006-2007)
- 2006 Appraisal Institute - Litigation Appraising- Special Cases
- 2005 Appraisal Institute - Computer Cash Flow Modeling (4 Hour)
- 2005 Appraisal Institute - Enhanced Cash Flow Modeling
- 2004 Appraisal Institute - Standards A- USPAP Update (2004-2005)
- 2004 Appraisal Institute - Advanced Applications (550)
- 2003 Appraisal Institute - Highest & Best Use (520)
- 2003 Appraisal Institute - Report Writing (540)
- 2001 Toledo Board of Realtors® - Fair Housing Standards
- 2001 Appraisal Institute - Advanced Sales & Cost Approaches (530)
- 2001 Appraisal Institute - Standards A- USPAP 15-Hour
- 2001 Appraisal Institute - Advanced Income Cap (510)
- 2000 Appraisal Institute - Basic Income Capitalization (310)
- 1999 Appraisal Institute - Appraisal Procedures (110)
- 1999 Appraisal Institute - Appraisal Principles (120)

CROSS SECTION OF APPRAISAL / ANALYSIS WORK

- Industrial Warehouses & Buildings
- Special Purpose Properties
- Commercial Buildings

- Regional Shopping Centers
- Commercial/Industrial Land
- Schools
- Medical Buildings
- Office Condominium Projects
- Residential Condominium Projects
- Distribution Centers
- Churches
- Subdivision Analysis
- Motels/Hotels
- Office Buildings
- Banking Buildings
- Residential Properties
- Community/Neighborhood Shopping Centers
- Automotive Dealerships
- Apartment Complexes
- Recreational Facilities
- Agricultural & Conservation Easements
- Parking Garages
- Golf Courses

APPRAISER DISCLOSURE STATEMENT

In compliance with Ohio Revised Code Section 4763.12 ©

1. Name of Appraiser: Joseph A Zavac

2. Class of Certification/Licensure:
- ✓ Certified General
- ____ Licensed Residential
- ____ Temporary ____ General ____ Licensed

Certification/Licensure Number: 2001021272

3. Scope: This report
- ✓ is within the scope of my Certification or License.
- ____ is not within the scope of my Certification or License.

4. Service Provided by:
- ✓ Disinterested & Unbiased Third Party
- ____ Interested & Biased Third Party
- ____ Interested Third Party on Contingent Fee Basis

5. Signature of person preparing and reporting the appraisal

Joseph C. Zavac

This form must be included in conjunction with all appraisal assignments or specialized services performed by a state-certified or state-licensed real estate appraiser.

State of Ohio
Department of Commerce
Division of Real Estate
Appraiser Section
Cleveland (216) 787-3100

05-96

Woodland Stewardship Management Plan

Prepared for
Brae Loch Investments AOA
7130 CO 121 Road
Fredericktown, Ohio 43019

Owner

Signed: _____

Date: _____

Case Number:

Preparer's Information:

Prepared by: Duane A. Wagner and Steven Wasem
Society of American Foresters Member ID: 8601

Signatures: _____

Steven M. Wasem
Ohio Forestry Consulting Service
447 S. Burgess Ave,
Columbus, Ohio 43204

Date: November 20, 2018

This plan is valid for the period beginning 12/01/2018 and ending 12/01/2028.

Woodland Stewardship Management Plan

Owner	Brae Loch Investments AOA	
Address	7130 CO 121 Road	
	Fredericktown, Ohio 43019	
Phone		Case Number
Cell		Email Address
County	Morrow	Township/Village/City: Franklin Section 4 Chester Twp
Parcel(s):	D10-001-00-228-02 (217.175 ac.) F14-001-00-055-08 (75.63 ac.) , F14-001-00-056-01 (27.996 ac.), D10-001-00-228-01 (17.72 a) D10-001-00-228-22 (9.481 ac.)	
Location:	Sec. R11-32	

Woodland Stewardship Acreage: 249.3 Non-woodland : 57.7

Total Property Acres 307

This plan was written to qualify the landowner's woodland for the programs checked below:

☐ Ohio Forest Tax Law ☐ American Tree Farm Program

☐ Environmental Quality Incentives Program (EQIP) ☒ CAUV

Property coordinates (report in WGS 84, decimal degrees.)

Longitude: 4483000 Latitude: 358800

Landowner Objectives

1. Our objectives are to manage the property for all attributes and opportunities that exist in the forest ecosystem that is in our interest including recreation, wildlife management, soil and water management, forest protection, timber product enhancement and other compatible conservation uses: We want to conserve the soil from water erosion by adhering to "Ohio's Best Management Practices" and other soil conservation techniques.
2. Leave this forestland in better condition for future generations.
3. Remove or hinder "Invasive Species".
4. Harvest timber to improve the forest.
5. To select tree species best suited to the soil and site's capability.

General Woodland Description

Timber types in the tract are predominantly Oak-Hickory and its subtypes. In general, the property lays pretty good, with a few steep areas. Growth rate is a little better than average for the timber type and some Timber Stand Improvement has been accomplished. Intermittence of pine throughout the woodland. The ice storms and the age of the Hard Maples point to a harvest. The property includes slopes, ridge tops, lowers, old field, flood plain and non forested areas. Oddly the timber has been treated as a unit in the past and has grown the same. Consistent density and specie composition with the exception of the few pines. The ash is all but dead and a hazard.

Unmarked property lines.

Inventory:

Sugar Maple	325,835	$500/m =	162,917.50
Red Oak	116,922	$600/m =	70,153.20
Cherry	98,773	$600/m =	59,263.80
Poplar	93,375	$300/m =	28,012.50
Hickory	87,648	$275/m =	24,103.20
Ash	8,675	$200/m =	1,735.00
Beech	74,865	$100/m =	7,486.50
Red Maple	22,437	$250/m =	5,609.25
Walnut	58,436	$1500/m =	87,654.00
Elm	10,075	$100/m =	1,007.50
Aspen	28,012	$100/m =	2,801.20
Pine	1,994	$5/ton =	9,970.00
Total	**925,053 bd. ft. Doyle**		**$460,713.65**

The Ohio Timber Markets Report of July 2018 was referenced for prices.