



GEOTECHNICAL
CONSULTANTS INC.



GCI PROJECT #18-E-21962-A

Report of Jurisdictional Waters Delineation

Proposed Buxton Mews Residential Development
Watkins Road
Marysville, Union County, Ohio

Prepared for:
Mr. Gary T. Dodson

July 23, 2018



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**REPORT OF
JURISDICTIONAL WATERS DELINEATION**

**PROPOSED BUXTON MEWS RESIDENTIAL DEVELOPMENT
WATKINS ROAD
MARYSVILLE, UNION COUNTY, OHIO**

GCI PROJECT NO. 18-E-21962-A

Prepared for:

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July 23, 2018

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- 1940,
- 1953,
- 1959,
- 1964,
- 1966,
- 1971,
- 1981,
- 1988,
- 1994,
- 2004,
- 2009,
- 2011, and
- 2015

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1.0 INTRODUCTION

Mr. Gary T. Dodson retained Geotechnical Consultants, Inc. (GCI) to perform a jurisdictional waters delineation of the proposed Buxton Mews residential development property located west of Watkins Road and southwest of Hinton Mill Road in Marysville, Union County, Ohio (the "property"). The property consists of 54± acres of vacant land identified by Union County parcel number 1100120010000. The property is vacant land used for agricultural purposes.

The delineation consists of three parts: 1) preliminary off-site determination (research of existing published data), 2) on-site delineation, and 3) data compilation/report preparation.

The purpose of the delineation was to locate and delineate the quantity and quality of jurisdictional waters on the property, as outlined in the agreement dated April 2, 2018 between GCI and Mr. Gary T. Dodson. GCI performed this delineation for specific application to the property described herein, in accordance with the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (1987) and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region.

This report is an instrument of professional service prepared by GCI for the sole use of Mr. Gary T. Dodson and other parties that may be designated jointly by Mr. Gary T. Dodson and GCI. Any other party that wishes to use or rely upon this report, or that wishes to duplicate, otherwise reproduce or copy, or excerpt from, or quote this report must apply for authorization to do so. Any unauthorized use of or reliance on this report shall release GCI from any liability resulting from such use or reliance. Any unauthorized duplication, other reproduction or copying, or excerpt or quotation of this report shall expose the violator to all legal remedies available to GCI. This report will become public information upon submittal to the USACE.

2.0 PROPERTY DESCRIPTION AND PROJECT SCOPE

The property is located in a rural-residential area west of Watkins Road and southwest of Hinton Mill Road in Marysville, Union County, Ohio. The property comprises 54± acres of land identified Union County parcel number 1100120010000. The property is predominately agricultural land with a wooded area comprising the northwest part of the property. A wooded stream corridor crosses the central part of the property in a general north/south direction. Areas surrounding the property are used for residential and agricultural purposes. Approximate latitude / longitude coordinates for the center of the property are 40.226856 / -83.309726.

The property is generally flat to gently sloping agricultural land with a wooded area comprising the northwest portion. Dominant tree and sapling species observed in the interior of the wooded northwest portion of the property included hickory, white oak, red oak, green ash, white ash, basswood, red maple, silver maple, and hackberry. The northeast part of the property contained weeds, grasses, and other non-woody plants. The property was bound by an existing residential development to the north, sparse residences to the east along Watkins Road, and vacant farmland to the west and south. Property location maps, a Union County Auditor's GIS Map, USGS (Marysville, Ohio) topographic maps, and aerial photographs showing the approximate property area are attached to this report. Photographs showing representative vegetation, property features, and views from several locations around the property are also included.

GCI identified one (1) wetland area (Wetland 1) totaling **0.14± acre**, one (1) stream (Stream 1) totaling **1,261± linear feet**, and three (3) ponds (Pond 1 through Pond 3) totaling **0.78± acre** within the property boundary. Attached to the report is a **Jurisdictional Waters Location Map** showing the location of the delineated wetland, ponds, and stream. The wetland, stream, and ponds were surveyed Diamond V, LLC with mapping completed by GCI.

The following report provides additional information, and should be read entirely.

3.0 RECORDS REVIEW AND DETERMINATION

The preliminary off-site determination consisted of a desktop review of published information including USGS topographic maps, US Department of Agriculture (USDA) soils map, US Fish & Wildlife Service (USFWS) National Wetland Inventory (NWI) map, and aerial photographs from local governmental agencies. GCI used this information to determine the geo-morphological setting at the property, soil types present, whether disturbed conditions existed at the property, and to determine the appropriate field delineation method to be used.

3.1 TOPOGRAPHY

GCI reviewed the 1961, 1973, and 2016 *Marysville, Ohio* United States Geological Survey (USGS) 7.5-minute series topographic maps. According to the maps, surface elevations range from approximately 960 feet above mean sea level (AMSL) to approximately 970 feet AMSL. Surface elevations in the general vicinity of the property decrease to the east, toward Mill Creek, located approximately 1,400 feet east of the property. An unnamed tributary of Mill Creek is shown crossing the central portion of the property in a general north/south direction. The confluence of the on-site stream with Mill Creek is located approximately 2,500 feet northeast of the property. The maps indicate no other streams, drainages, ponds, wetlands, or other surface waters within the property boundary.

GCI uses USGS topographic maps as an indicator of watershed characteristics on the property. USGS maps should not be relied upon to identify wetlands, ponds, or streams because the maps are created from widely scattered spot elevations averaged across an area. The maps may not identify small depressional areas or streams and are not updated frequently. The appendix of this report includes photocopies of portions of these USGS maps showing the property area.

3.2 SOILS

GCI reviewed information from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), the USDA Web Soil Survey website¹ for the property area, and the list of *Hydric Soils of the United States* (published by NRCS in cooperation with the National Technical Committee for Hydric Soils). These sources indicate soils underlying the property consist of the following:

TABLE 1
Property Soil Designation

Map ID	Map Unit Name	% Slope	Hydric Classification
Blg1A1	Blount silt loam, ground moraine	0-2	Non-hydric with hydric components
Blg1B1	Blount silt loam, ground moraine	2-4	Non-hydric with hydric components
Gwg1B1	Glynwood silt loam, ground moraine	2-6	Non-hydric
Pk	Pewamo silty clay loam	0-2	Hydric

Blount silt loam (Blg1A1 and Blg1B1) is described as a very deep, nearly level to gently sloping, somewhat poorly drained soil with slow permeability and moderate available

¹ <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>

water capacity.

Glynwood silt loam (Gwg1B1) is described as a very deep, gently sloping, moderately well drained soil with slow to very slow permeability and low available water capacity.

Pewamo silty clay loam (Pk) is described as a very deep, level, very poorly drained soil with moderately slow permeability and high available water capacity.

According to the soil map, hydric Pewamo soil is located on the southwest part of the property.

Mineral based soils (as opposed to carbon- or organic-based soils) generally contain significant amounts of iron and manganese. As the iron component of the soil matrix comes into contact with the atmosphere, the iron tends to oxidize giving soils a high “chroma” or rust-like color. This characteristic is typically observed in upland (i.e., non-wetlands) areas where oxygen is abundant. On the contrary, mineral soils that are saturated for extended periods (e.g., hydric soils) tend to have oxygen ions stripped, chemically reducing iron and giving these soils bluish-grayish coloring or low chroma. This reduced condition in mineral soils is known as “gleying” and is typically observed in wetlands, where soil oxygen contents are generally lower relative to upland soils. Low oxygen levels in reduced soils also tend to slow decomposition, leading to increased organic content. (Note: high organic levels in soils can present construction challenges and thus should be geotechnically assessed by a soils engineer for load bearing capacities if construction is planned in areas having organic soils.)

3.3 NATIONAL WETLANDS INVENTORY (NWI) MAP

GCI reviewed the NWI Map for wetlands information in the property area. The United States Fish and Wildlife Service (USFWS) produced NWI mapping as an attempt to document wetlands in the United States. The USFWS drafted NWI maps using high-altitude infrared aerial photography to identify areas with saturated or inundated soils. Areas that are saturated or inundated are typically lower in temperature than dryer areas, giving wet areas unique heat signatures compared with surrounding upland areas. The USFWS mapped these cooler areas as wetlands without field verification.

GCI uses NWI maps as a desk top determination tool. NWI maps may not reflect actual field conditions due to meteorological or seasonal conditions that may have existed at the time of data collection. GCI typically uses NWI maps to plan field reconnaissance and as an indicator of areas that may support wetlands; however, USACE-approved delineations often deviate significantly from the NWI Maps.

Review of the NWI map identifies one wetland mapping symbol within a stream corridor on the south central part of the property, and two pond symbols on the northeast part of the property. The two pond symbols have PUBGx designations. The PUBGx designation signifies an area that is palustrine (non-tidal wetlands dominated by trees, shrubs, persistent emergents, or emergent mosses or lichens), has an unconsolidated bottom, is intermittently exposed, and is excavated. The wetland symbol on the south central part of the property has a PEM1C designation, indicating an area that is palustrine, contains emergent, persistent vegetation (characterized by erect, rooted, herbaceous vegetation which is present for most of the growing season and remains standing at least until the beginning of the next growing season), and has surface water (seasonally flooded) present for extended periods, especially early in the growing season.

The appendix of this report includes a copy of the NWI map for the property area.

3.4 FEMA FLOOD INSURANCE RATE MAP (FIRM)

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the property area indicates the majority of the property is within Zone X, which is an area determined to be of minimal flood hazard. The exception is the central part of the property, where a stream (Unnamed Tributary to Mill Creek) is shown crossing the property. This stream corridor is depicted as Zone A; an area subject to inundation by the 1% annual flood. Base flood elevations have not been determined in Zone A.

3.5 AERIAL PHOTOGRAPHS

Current regulations require that wetland delineations be performed in accordance with the 1987 USACE Wetland Delineation Manual and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region. These manuals specify two primary methods of delineation: the *routine method* and the *disturbed condition method*. The *routine method* is used on undisturbed properties and is preferred by USACE because wetland boundaries can be accurately identified by a wetland professional based on actual field boundaries. The *disturbed condition method* is used on properties that have had previous land disturbance. Disturbed properties often require reliance on historical aerial photography, soil maps, and NWI maps, and can result in an over-estimation of jurisdictional water area size.

GCI reviewed aerial photographs dated 1940, 1953, 1959, 1964, 1966, 1971, 1981, 1988, 1994, 2004, 2009, 2011, and 2015. GCI uses aerial photographs as an indicator to determine historical uses of the property, whether the property had been significantly disturbed within the past few years, and for visual evidence of ponds, streams, or saturated or inundated soils and wetlands on the property.

Throughout the reviewed aerial photographs, the property appears to be agricultural land with a wooded area on the northwest portion. A stream is apparent crossing the central portion of the property in a general north/south direction. A second stream/drainage can be seen converging with this stream on the northeast portion of the property in the 1940 through 1964 aerial photographs. This second stream/drainage appears to drain agricultural areas to the north, and becomes less visible in the 1966 through 1971 aerial photographs. The north adjoining property appears developed with a residential neighborhood beginning in the 1981 aerial photograph.

Two ponds are visible on the northeast part of the property in the 2009 and 2011 aerial photograph. A third pond is visible in this area in the 2015 aerial photograph.

The 2015 aerial photograph indicates the property is similar in appearance to what was observed during our site visit on June 27, 2018.

Copies of the aerial photographs showing the assessed area are attached to this report.

3.6 RECORDS REVIEW DETERMINATION CONCLUSIONS

The published information reviewed indicated property conditions were generally unchanged for several years prior to this delineation, such that the property was considered undisturbed for data collection. Therefore, the routine method was used in this assessment.

Information obtained from USGS topographic maps and aerial photographs indicate the potential for one stream crossing the central part of the property and three ponds located on the northeast part of the property. The NWI map indicates the potential for a wetland within the stream corridor on south central part of the property.

Two of the ponds on the northeast portion of the property appear to have been constructed sometime between 2004 and 2009. A third pond was constructed further east of the two original ponds sometime between 2011 and 2015. No other streams, ponds, or potential wetland areas are apparent on the property from review of the published information.

The potential for wetlands and streams within an area cannot be determined solely from a records review determination; therefore, an on-property investigation is required to verify on-property conditions.

4.0 JURISDICTIONAL WATERS DELINEATION

GCI performs their field visits for Jurisdictional Waters Delineations using criteria and guidance in the Corps of Engineers' Wetland Delineation Manual (USACE, 1987) and the 2010 Midwest Regional Supplement to the 1987 Wetland Delineation Manual. In this method, vegetation, hydrology, and soil criteria are used to identify jurisdictional wetlands. The delineation method and vegetation sampling methodology uses the procedures for Routine Determinations found in the 1987 and 2010 manuals.

The property was assessed in accordance with guidelines from the USACE pertaining to potential jurisdictional waters of the United States. All potential wetlands, streams, and drainage ditches were followed to determine the flow regime and whether a significant nexus to a jurisdictional water of the U.S. could be established.

The field investigation was conducted by walking and visually surveying the subject property, and in the vicinity, to collect wetland and stream data, as necessary.

Photographic documentation of the potential wetlands, vegetation, streams, and general landscape photographs are attached. GCI recorded observations concerning soils, hydrology, and vegetation in potential wetland areas on the attached data forms.

5.0 PROPERTY VISIT AND ON-PROPERTY DETERMINATION

Mr. Matthew R. Kaminski with GCI conducted the Jurisdictional Waters Delineation during the morning hours on Wednesday June 27, 2018. The atmospheric conditions during the property reconnaissance included clear skies with a temperature of approximately 70 degrees Fahrenheit.

Section 404 of the Clean Water Act requires a pre-discharge notification to the USACE for approval, prior to placing dredged or fill material into jurisdictional waters connected to navigable waters. Connection to navigable waters is characterized as any surface water connection with a defined bed and bank to streams or other open waters. House Bill 231 requires an Ohio Isolated Wetland Permit (OIWP) from Ohio EPA prior to impacting isolated wetlands not determined to be connected to navigable waters.

Three wetland criteria are required to be present to establish the presence of wetlands: hydric soils, hydrophytic vegetation, and wetland hydrology; and, all three criteria must be present for an

area to be identified as wetland. These three criteria are defined and explained in detail in the Corps of Engineers' Wetland Delineation Manual (USACE, 1987) and the 2010 Midwest Regional Supplement to the 1987 Wetland Delineation Manual. The Wetlands Research Program of the USACE Waterways Experiment Station developed the manual in 1987. GCI followed the methods described in these manuals in performing the delineation. No other warranty is expressed or implied.

After collecting pertinent information through the preliminary off-site determination, GCI used the routine method to determine if wetland areas existed on property. The approach used for the routine determination was the plant community assessment procedure. This approach required initial identification of representative plant community types in the subject area followed by characterization of vegetation, soils, and hydrology for each community type.

Upon identification of hydrophytic (wetland) and non-wetland communities, the wetland boundary was flagged. Field notes were taken at points where the dominant vegetation species changed from wetland to upland or hydrologic indicators became transitional. GCI recorded observations concerning hydrology and vegetation on the attached data forms.

5.1 HYDRIC SOILS CRITERIA

GCI performs shovel test pits to characterize soil conditions and to evaluate the presence or absence of hydric soil features. A drain spade is used to collect soil samples from a maximum depth of approximately 20 inches below ground surface. GCI determines the presence or absence of hydric soils by comparing soil samples to a Munsell soil color chart, as soil colors often reveal whether a soil is hydric or non-hydric. The standardized Munsell soil colors consist of three components: hue, value, and chroma. Soil in hydric soil areas typically show yellow-red hues, varying gray color values, and chromas of one or two. Chromas of two or less are considered low, and are often diagnostic of hydric soils. Soils are considered hydric if at least one primary indicator or at least one problematic hydric soil indicator is present, as defined by the USACE.

Hydric mineral soils saturated for long periods of the growing season, but unsaturated for some time, often develop mottles and/or a low chroma matrix. GCI observed these soil characteristics at the property. Therefore, the property satisfied the hydric soil criteria for jurisdictional wetlands.

5.2 WETLAND HYDROLOGY CRITERIA

Wetland hydrology is determined present in areas that are periodically inundated or have soils saturated to the surface sometime during the growing season. This is a dynamic characteristic and is usually not present during drier periods of the year. Primary wetland hydrology indicators include, but are not limited to, surface water, high water table, inundation, soil saturation in the upper 12 inches of the soil, water marks, sediment deposits, drift deposits, and water-stained leaves. Secondary wetland hydrology indicators include surface soil cracks, drainage patterns, dry-season water table, crayfish burrows, saturation visible on aerial imagery, stunted or stressed plants, geomorphic position, and FAC-Neutral Test of vegetation. One primary indicator or two or more secondary indicators are required to establish a positive indication of hydrology.

GCI performed a site walkover on June 27, 2018. At that time, GCI observed primary and secondary hydrology indicators on the property; therefore, the property satisfied the hydrology criteria for jurisdictional wetlands.

5.3 HYDROPHYTIC VEGETATION CRITERIA

Hydrophytic vegetation is present if more than 50 percent of plant species within a plant community have an indicator status of obligate wetland (OBL), facultative wetland (FACW), and/or facultative (FAC). The indicator status of plant species found in wetlands is listed in the Midwest 2012 Final Regional Wetland Plant List published by the USACE. GCI used this data, and determined hydrophytic vegetation dominance was present in several areas of the property. Therefore, the property satisfied the vegetation criteria for jurisdictional wetlands.

5.4 ON-PROPERTY DETERMINATION CONCLUSIONS

The field investigation confirmed:

- One (1) potentially jurisdictional stream located on the central portion of the property,
- One (1) potentially jurisdictional wetland located within the stream corridor/floodplain on the central portion of the property, and
- Three (3) isolated ponds on the northeast part of the property.

Refer to the Jurisdictional Waters Location Map attached to this report for the locations and identities of the wetland, ponds, and stream delineated on the property.

6.0 JURISDICTIONAL WATERS

According to Section 404 of the Clean Water Act (CWA), the USACE asserts jurisdiction over Traditional Navigable Waters, which includes all waters as outlined in 33 C.F.R. § 328.3(a)(I), and 40 C.F.R. § 230.3 (s)(I). This includes non-navigable tributaries of traditional navigable waters that flow relatively permanently for at least 3 months of the year. Moreover, the USACE will also assert jurisdiction over non-navigable, not relatively permanent tributaries, where such tributaries have a significant nexus to traditional navigable waters.

GCI identified one (1) wetland area (Wetland 1) totaling **0.14± acre**, one (1) stream (Stream 1) totaling **1,261± linear feet**, and three (3) ponds (Pond 1 through Pond 3) totaling **0.78± acre** within the property boundary. Attached to this report is a **Jurisdictional Waters Location Map** showing the location of the delineated wetland, ponds, and stream.

TABLE 2
Stream Information

Stream ID	Length of Stream On-Site	Classification	Start Location	End Location
Stream 1	1,261	Perennial	40.225573 -83.309242	40.228257 -83.307792
Total	1,261			

Stream 1 is a perennial stream that crosses the central portion of the property from south to north. Stream 1 appears to have a direct surface water connection to Mill Creek; therefore, is likely jurisdictional.

TABLE 3
Wetland Information

Wetland ID	Acreage	Description	Classification	Location
Wetland 1	0.14	Emergent	Jurisdictional	40.226723 -83.308795
Total	0.14			

Wetland 1 is an emergent wetland located within the floodplain of Stream 1. This wetland is generally dominated by reed canary grass. It is GCI's opinion that Wetland 1 is likely a considered waters of the U.S due to its close proximity to Stream 1, therefore, is likely jurisdictional.

TABLE 4
Pond Information

Pond ID	Acreage	Description	Classification	Location
Pond 1	0.39	Deep Water Habitat	Isolated	40.227946 -83.308839
Pond 2	0.21	Excavation	Isolated	40.227767 -83.309209
Pond 3	0.18	Excavation	Isolated	40.227790 -83.308006
Total	0.78			

Review of aerial photographs indicate Pond 1 and Pond 2 were constructed sometime between 2004 and 2009. Pond 3 was constructed sometime between 2011 and 2015. Information from the property owner indicates Pond 2 and Pond 3 were originally created due to excavation and use of the soils elsewhere for construction purposes.

Pond 1, Pond 2, and Pond 3 have no apparent surface water connection to nearby streams. Pond 1 meets the criteria for deep water habitat and lacks a wetland fringe. GCI observed emergent vegetation (cattails) growing around the perimeter of Pond 2 and Pond 3.

6.1 OHIO RAPID ASSESSMENT METHOD (ORAM)

GCI completed ORAM score sheets for the wetland area delineated on the property. The ORAM score for Wetland 1 was calculated at **38.0**. This puts Wetland 1 in Category 2, according to Ohio EPA standards. Copies of the ORAM forms are appended.

7.0 PERMITS

The USACE administers Nationwide Permits (NWP) under the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (CWA). Section 404 deals with the physical aspects of ground modification or "impacts" (e.g., draining, dredging, and filling). Mucking out a wetland and culverting a stream for a road crossing are examples of such impacts. The USACE must generally be involved in all jurisdictional wetland, pond, or stream related activities.

Ohio EPA issues section 401 permits of the CWA. Section 401 deals with how a specific activity will affect water quality. Parameters such as sedimentation and nutrients are

considered in 401 permitting. Wetlands are able to trap sediment and convert nutrients; hence, negative wetland or stream impacts effectively may lower water quality downstream. The Ohio EPA has jurisdiction over wetlands or other waters the USACE has determined to be “isolated” and not connected to navigable waters by direct surface water drainage.

The USACE Districts for the State of Ohio have imposed regional, general, and specific conditions on NWP for the entire state. Specific conditions imposed on NWP for the State of Ohio include Ohio EPA 401 Water Quality Certification (WQC). Impacts to jurisdictional waters must meet the Ohio EPA eligibility criteria for 401 WQC for NWP to be valid. If 401 WQC eligibility requirements are not met, individual 401 WQC or Director’s Authorization is required.

Individual section 401 and 404 permits generally are costly and often take several months to receive complete regulatory agency review. Under the CWA, NWP are issued to speed up the permitting process and reduce administrative burdens for minor activities. Whether filling, re-routing, or enhancing jurisdictional waters, the USACE must be notified at a minimum under most NWP.

Under the NWP, stream impacts are generally limited to 300 linear feet, while wetland impacts are generally limited to ½ acre. Limitations and conditions vary from permit to permit and are dependent on property development plans. Mitigation may be necessary for impacts to jurisdictional waters. The NWP cannot be used if any the following are to be impacted:

- high quality, isolated, or rare wetlands,
- wetlands within the 100 year flood plain,
- state or National Scenic Rivers,
- navigable waterways,
- areas where endangered species are known to exist,
- areas where historic or archeological sites or structures are known to exist,
- areas containing a large concentration of shellfish beds,
- areas where water quality will be significantly degraded, and
- Critical Resource Waters.

8.0 CLOSING

GCI identified one (1) wetland area (Wetland 1) totaling 0.14± acre, one (1) stream (Stream 1) totaling 1,261± linear feet, and three (3) ponds (Pond 1 through Pond 3) totaling 0.78± acre within the property boundary. Attached to this report is a Jurisdictional Waters Location Map showing the location of the delineated wetland, ponds, and stream.

It is GCI’s opinion that Wetland 1 and Stream 1 are potentially jurisdictional waters of the U.S. Pond 1, Pond 2, and Pond 3 have no apparent surface water connection to nearby streams and were created by excavation for construction purposes within the last 5 to 10 years. Pond 1 meets the criteria of deep water habitat and lacks a wetland fringe; therefore, appears to be a non-jurisdictional open-water feature. Pond 2 and Pond 3 have emergent vegetation (cattails) growing around their perimeter; therefore, may be considered isolated waters of the State of Ohio.

Section 404 of the CWA requires pre-construction notification (PCN) to the USACE and a Department of the Army (DA) permit prior to discharging dredged or fill material into waters of the U.S., including wetlands. Wetlands determined by the USACE to be isolated are regulated by the Ohio EPA.

GCI recommends obtaining USACE verification of this delineation prior to development of the property to determine permitting requirements for proposed wetland, pond, and stream impacts. With your authorization, GCI will supply a copy of this report to the USACE, Huntington, WV District Office for verification. With this reported information and/or a property visit, the USACE will make the official determination on jurisdiction.

GCI appreciates the opportunity to serve you on this project. Please contact our office with any questions or concerns regarding our report.

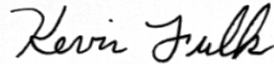
9.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

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Matthew R. Kaminski, EP
Senior Project Manager

▪ **Education:**

2003 BS Environmental Geography, Ohio University

▪ **Active Registration & Certification:**

2006 38 Hour Army Corps of Engineers Wetland Delineation & Management Training Program
2011 OSHA 40-hour Hazardous Waste Operations
2017 GBA's *Fundamentals of Professional Practice (FOPP)*

Mr. Kaminski is qualified as an Environmental Professional as defined by U.S. EPA's All Appropriate Inquiry legislation, and by ASTM Practice E1527-13.

▪ **Experience & Qualifications:**

Since joining GCI in 2005, Mr. Kaminski has been responsible for conducting numerous Phase I environmental site assessments (Phase I ESAs) of residential, commercial, industrial, and agricultural properties in Ohio, Michigan, West Virginia, and Pennsylvania.

Mr. Kaminski is responsible for preparing reports required to meet compliance under the American Society for Testing and Materials (ASTM), and federal, state, and local regulations including the National Environmental Policy Act (NEPA), Ohio Department of Development (ODOD), Ohio Housing Finance Agency (OHFA), and the U.S. Department of Housing and Urban Development (HUD).

Mr. Kaminski's experience includes managing and performing multidisciplinary environmental projects including Phase I ESAs, Ohio Voluntary Action Program (Ohio VAP) Phase I property assessments, wetland delineations, stream evaluations, 401/404 permit applications, groundwater sampling, and hazardous materials surveys.

▪ **Selected Projects**

- Performed ground water well development and sampling using low-flow methods in accordance with Ohio EPA requirements for numerous Ohio Voluntary Action Program (VAP) projects.
- Multiple hazardous materials surveys and Phase I ESAs for the Grandview Yard project, Grandview Heights, OH
- Phase I ESA Nine Brooksedge Corporate Center Office Buildings, Westerville, OH
- Phase I ESA Shell Station, Bexley, Franklin County, OH
- Jurisdictional Water Delineation 25-Acre Property, Mansfield, OH
- Phase I ESA and Preliminary Wetland and Stream Assessment 7+ Acre Proposed Office/Warehouse Property, Delaware, Delaware County, OH
- Jurisdictional Water Delineation 735-Acre Property, Sunbury, OH



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330.965.1410 **fax**

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2380 Bellbrook Avenue
Xenia, OH 45385
937.736.2053 **phone**

www.gci2000.com

Kevin J. Fulk, MBA, EP, LEED AP
Senior Project Manager

▪ **Education:**

BS Architectural / Environmental Design – Bowling Green State University.
Bowling Green, OH (1992)
MBA Business Administration – Capital University, Columbus, OH (2000)

▪ **Active Registration & Certification:**

Evaluation Specialist No. 31832 – Ohio Certified Asbestos Hazard (1989)
Construction Documents Technologist (1993)
OSHA 40-Hr. Hazardous Waste Operations (1996)
LEED Accredited Professional (2009)
Vapor Encroachment Screening (2012)

Mr. Fulk graduated from GBA's *Fundamentals of Professional Practice (FOPP)* course in 2006.

▪ **Experience & Qualifications:**

Mr. Fulk's experience includes project management of environmental studies including Phase I & II Environmental Site Assessments, asbestos surveys, operations and maintenance plans for buildings with asbestos containing materials, hazardous materials surveys, and wetland assessments.

With more than 21 years' experience as an environmental consultant, Mr. Fulk has provided field monitoring of asbestos abatement projects collected water and soil samples for laboratory analysis from monitoring wells, manholes, discharge pits, soil borings and test pits; environmental proposal/report preparation; and in-house report reviews. Environmental reporting includes satisfying HUD, FHA, and OHFA lending requirements for federal and state funded projects.

Since joining GCI in 1995, Mr. Fulk has been responsible for conducting more than 800 environmental studies and more than 400 asbestos studies for projects throughout Ohio and neighboring states.

Mr. Fulk is qualified as an Environmental Professional as defined by U.S. EPA's All Appropriate Inquiry legislation and ASTM Practice E1527-13. Mr. Fulk is a member of the Building Environment Council of Ohio.

▪ **Selected Projects:**

- Phase I & II ESAs of more than 30 parcels at The Waterfront, a redevelopment of a former steel mill into a mixed-use development, Pittsburgh, PA.
- Provided asbestos abatement monitoring for the Ohio Statehouse renovation projects, various government institutions and utility facilities, and school buildings.
- Performed asbestos surveys of numerous Central Ohio projects including Morse Centre, Town & Country Shopping Center and the Worthington Mall.
- Performed hazardous materials and asbestos surveys for the Grandview Yard project, Grandview Heights, OH.





NOTICE: All PROPERTY VALUE information reflects Tax Year 2017 CERTIFIED VALUES. To obtain any 2018 value information, such as New Construction value, please call the Auditor's Office at 937-645-3003 or email at auditor@co.union.oh.us.

Submit

Parcel 1100120010000

2017 VALUES AND TAXES DUE IN 2018

Owner Name	Market Value	Taxable Value	Starting Balance	Real Estate Net Tax	Other Charges and Credits	Receipts	Parcel Balance
BUXTON DEVELOPMENT CO	153,530	53,740	24,831.63	2,810.32	477.52	(3,883.42)	24,236.05
Property Location	WATKINS RD						

Main Menu

- General Information
- Land Detail
- Buildings Detail
- Value History
- Sales History
- Tax Charges and Payments
- Current Tax Rates
- Where Your Taxes Go
- Tax Estimator
- Map
- Sketch
- Property Record Card
- Photo Gallery
- Deed Record
- New Search

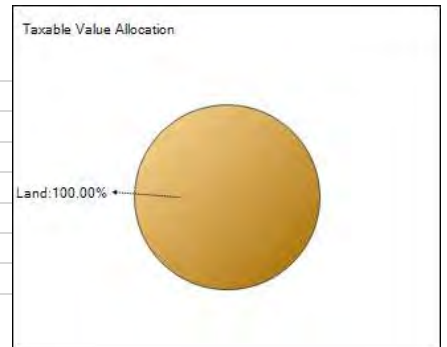
GENERAL INFORMATION

Neighborhood 1111100-
DOVER/MARYSVILLE RES/AG
Map Number 1030000053000

Parcel Number*	Land Use	Market Land	Market Buildings	Market Total	Taxable Land	Taxable Buildings	Taxable Total**
1100120010000	100 - Agricultural Vacant Land				153,530	0	153,530
		Totals: 153,530	0	153,530	53,740	0	53,740

Pie Chart Summary Level

All Parcels



Owners

BUXTON DEVELOPMENT CO

DELINQUENT TAX STATUS

Delinquent Since	2009
Advertised Delinquent	Yes
Under Payment Contract	Yes
Certified Delinquent	Yes
In Bankruptcy	No
In Foreclosure	No
In Dispute	No
Last Delinquent	n/a

Legal Description

VMS 9028

OR 527 PG 782

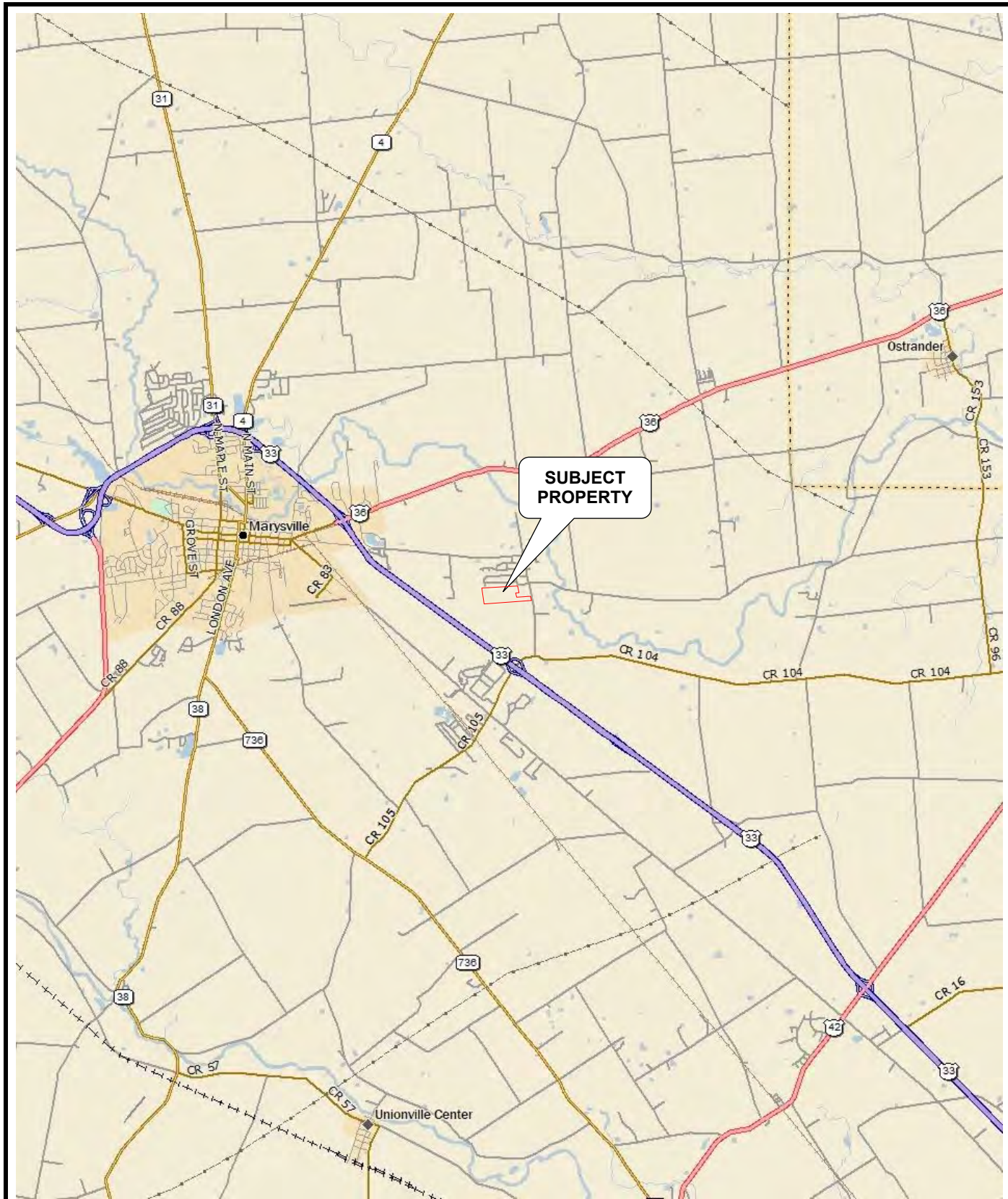
* Value may be allocated to more than one parcel. Examples: (1) The value basis for Homestead Credit may be shared between a mobile home parcel and its situs land parcel. (2) Property under one or more Tax Incentive Programs (e.g. TIF district, Enterprise Zone, etc.) may have a base parcel with pre-program values and one or more parcels with values subject to the terms of the program agreements.

** Taxable Value is 35% of Market Value for most taxpayers. The rate is 40% for mobile homes purchased prior to 2000 whose Market Value is based on a depreciation schedule. Taxable Value for Public Utility (PU) parcels is set by the State. The State does not report PU Market Value to the County, so PU Market Value is set equal to Taxable Value.

MOST RECENT TAX SAVINGS	Qualified	Tax Basis Value	Savings
Non-Business Credit	Yes	53,740	294.38
Owner Occupancy Credit	No	0	0.00
Homestead Credit	No	0	0.00
Other	No	0	0.00
Total: 294.38			

Data extracted from County files
6/28/2018 11:07:37 PM

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Research Corporation



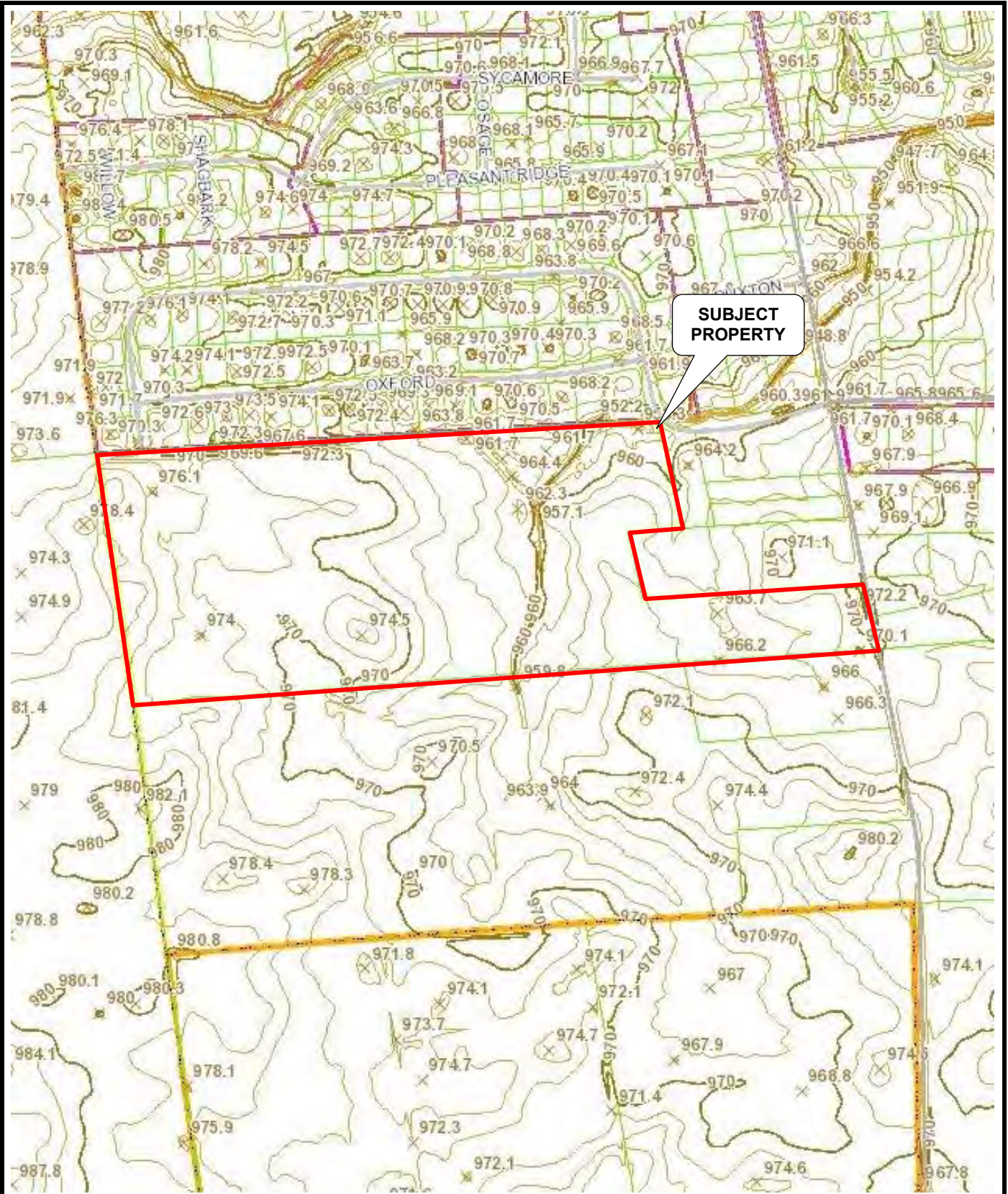
**PROPOSED BUXTON MEWS RESIDENTIAL DEVELOPMENT
WATKINS ROAD
MARYSVILLE, UNION COUNTY, OHIO**





PROPOSED BUXTON MEWS RESIDENTIAL DEVELOPMENT
WATKINS ROAD
MARYSVILLE, UNION COUNTY, OHIO





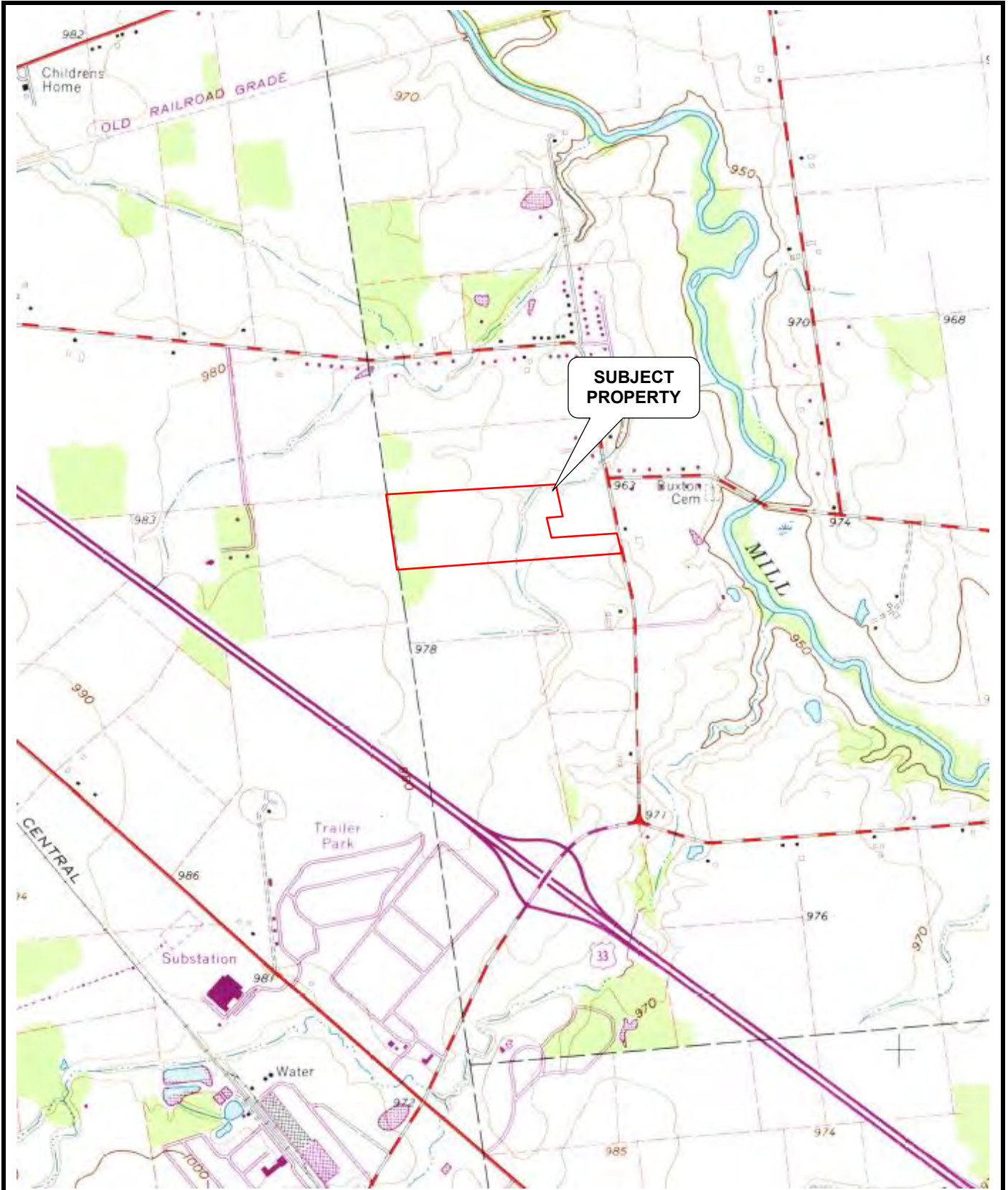
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MARYSVILLE, UNION COUNTY, OHIO





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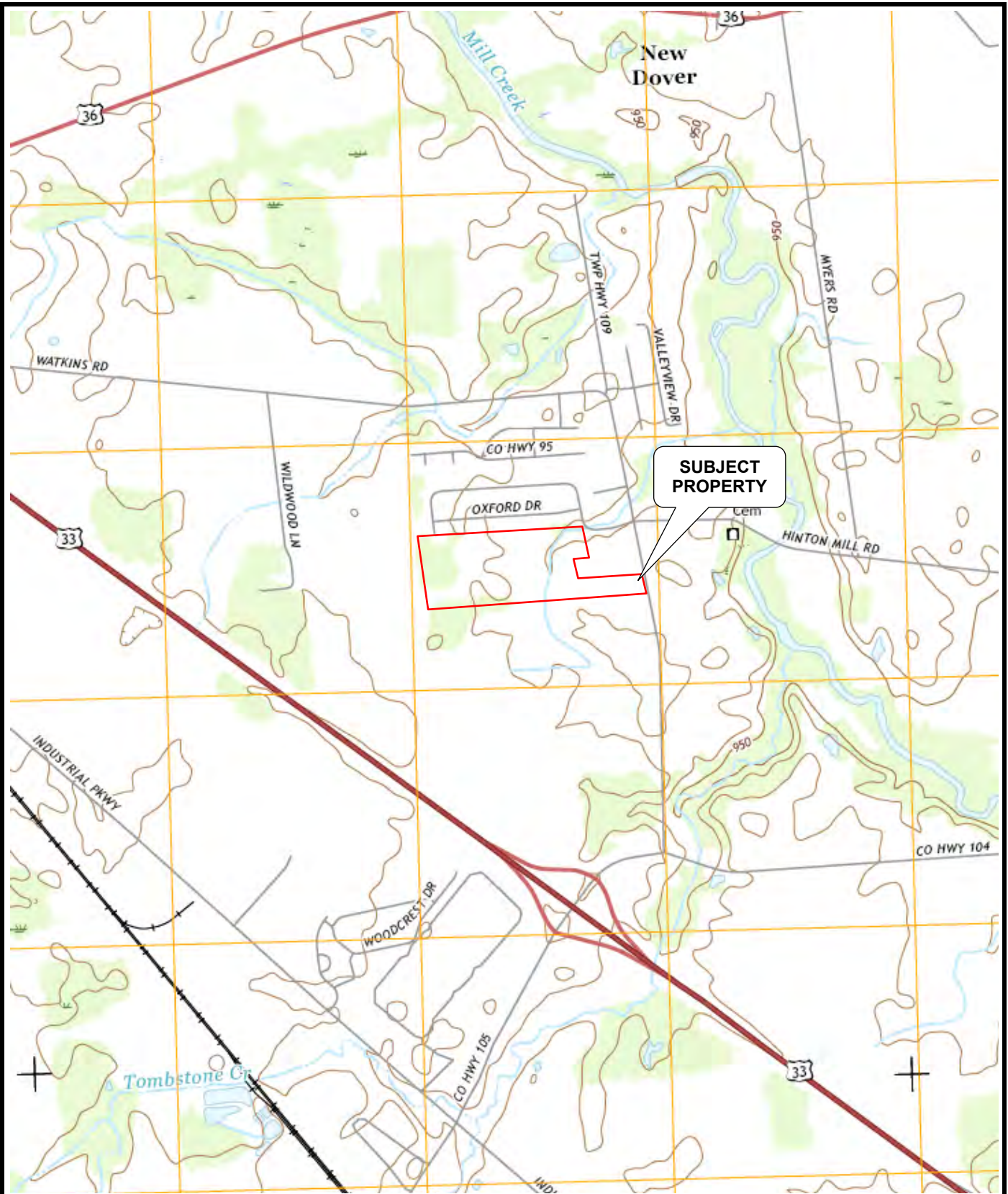




North

**PROPOSED BUXTON MEWS RESIDENTIAL DEVELOPMENT
WATKINS ROAD
MARYSVILLE, UNION COUNTY, OHIO**





PROPOSED BUXTON MEWS RESIDENTIAL DEVELOPMENT
WATKINS ROAD
MARYSVILLE, UNION COUNTY, OHIO



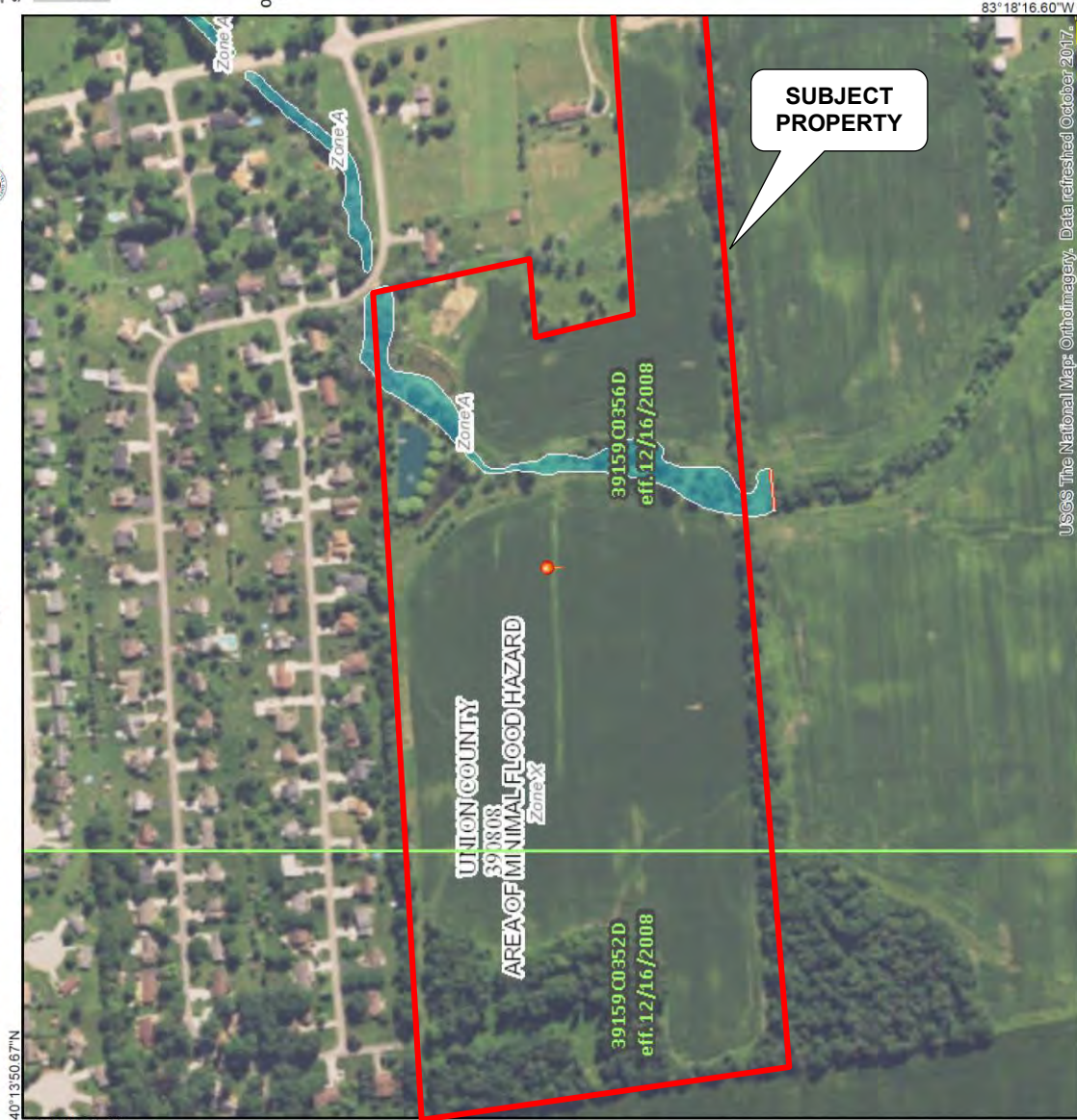


**PROPOSED BUXTON MEWS RESIDENTIAL DEVELOPMENT
WATKINS ROAD
MARYSVILLE, UNION COUNTY, OHIO**





National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

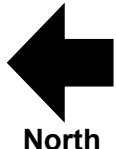
SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE)	With BFE or Depth	Regulatory Floodway
	Zone AE, AH, VE, AR	Zone AE, AH, VE, AR	
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile	Zone X	
	Future Conditions 1% Annual Chance Flood Hazard	Zone X	
	Area with Reduced Flood Risk due to Levee. See Notes, Zone X		
	Area with Flood Risk due to Levee	Zone D	
OTHER AREAS OF FLOOD HAZARD	Area of Minimal Flood Hazard	Zone X	
	Effective LOMRPs		
	Area of Undetermined Flood Hazard	Zone D	
OTHER AREAS	Channel, Culvert, or Storm Sewer		
	Levee, Dike, or Floodwall		
GENERAL STRUCTURES	Cross Sections with 1% Annual Chance Water Surface Elevation		
	Coastal Tract		
	Base Flood Elevation Line (BFE)		
	Limit of Study		
	Jurisdiction Boundary		
	Coastal Tract Baseline		
	Profile Baseline		
	Hydrographic Feature		
OTHER FEATURES	Digital Data Available		
	No Digital Data Available		
	Unmapped		
MAP PANELS			

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/13/2018 at 10:13:30 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

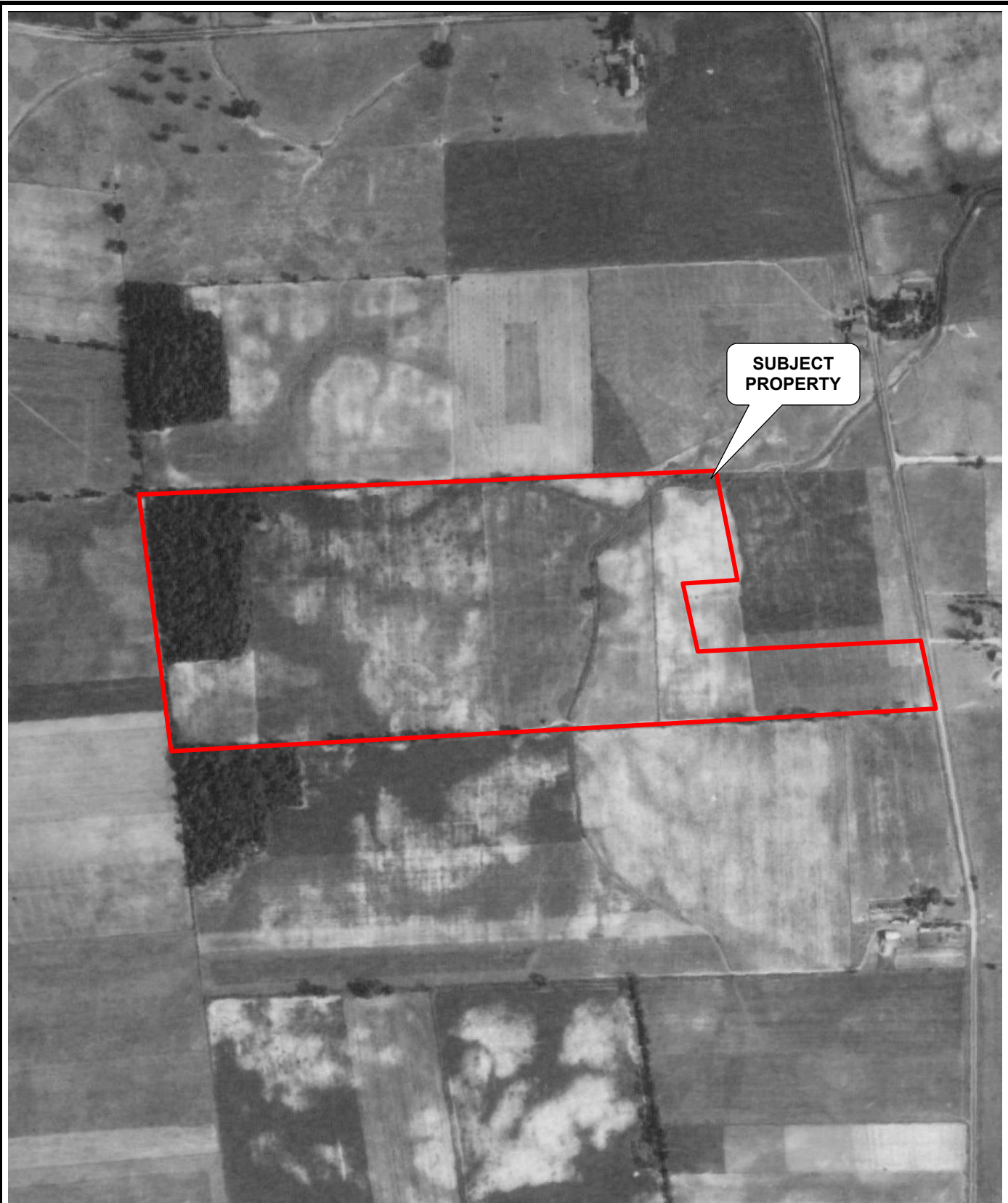
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



North

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MARYSVILLE, UNION COUNTY, OHIO

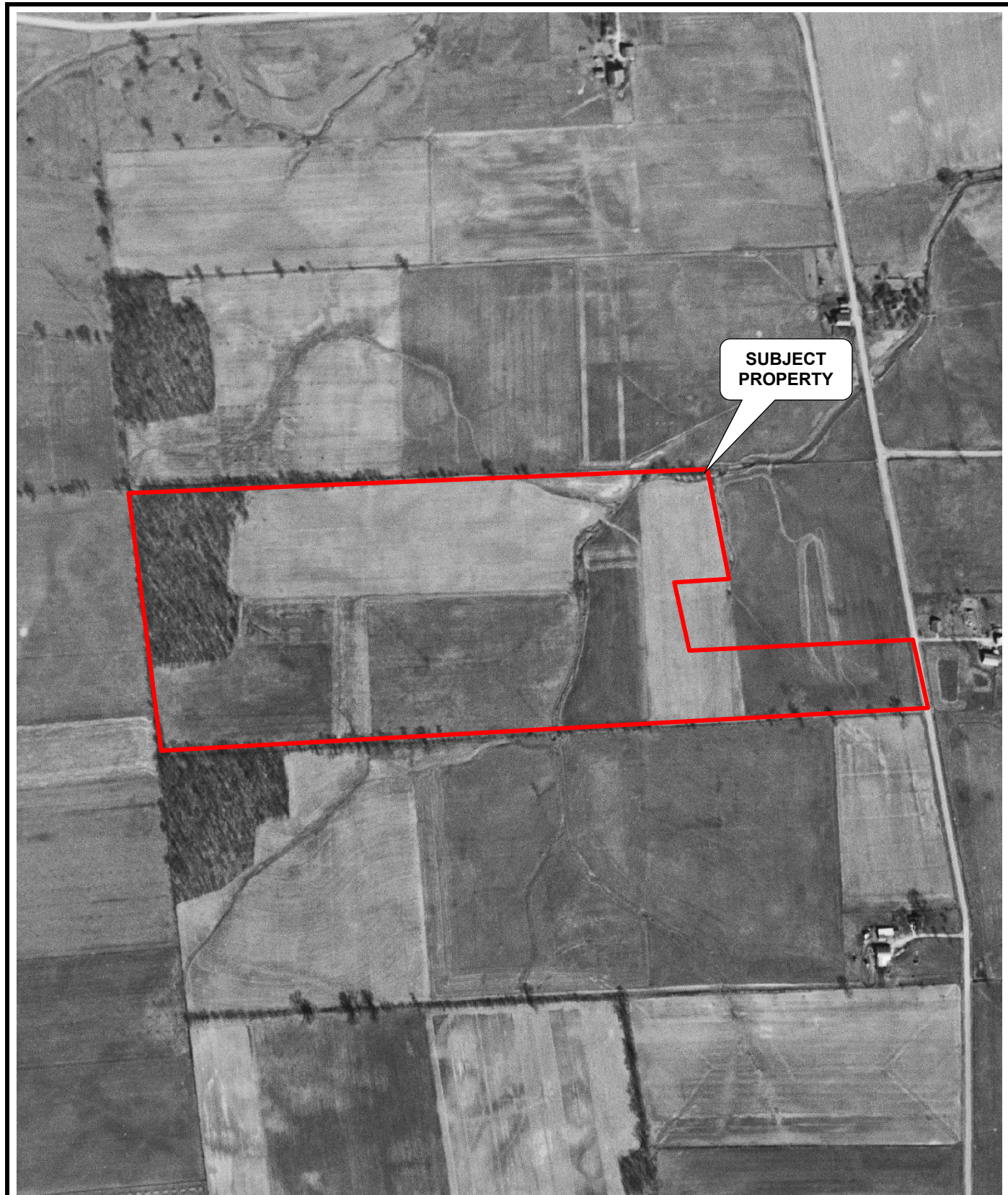




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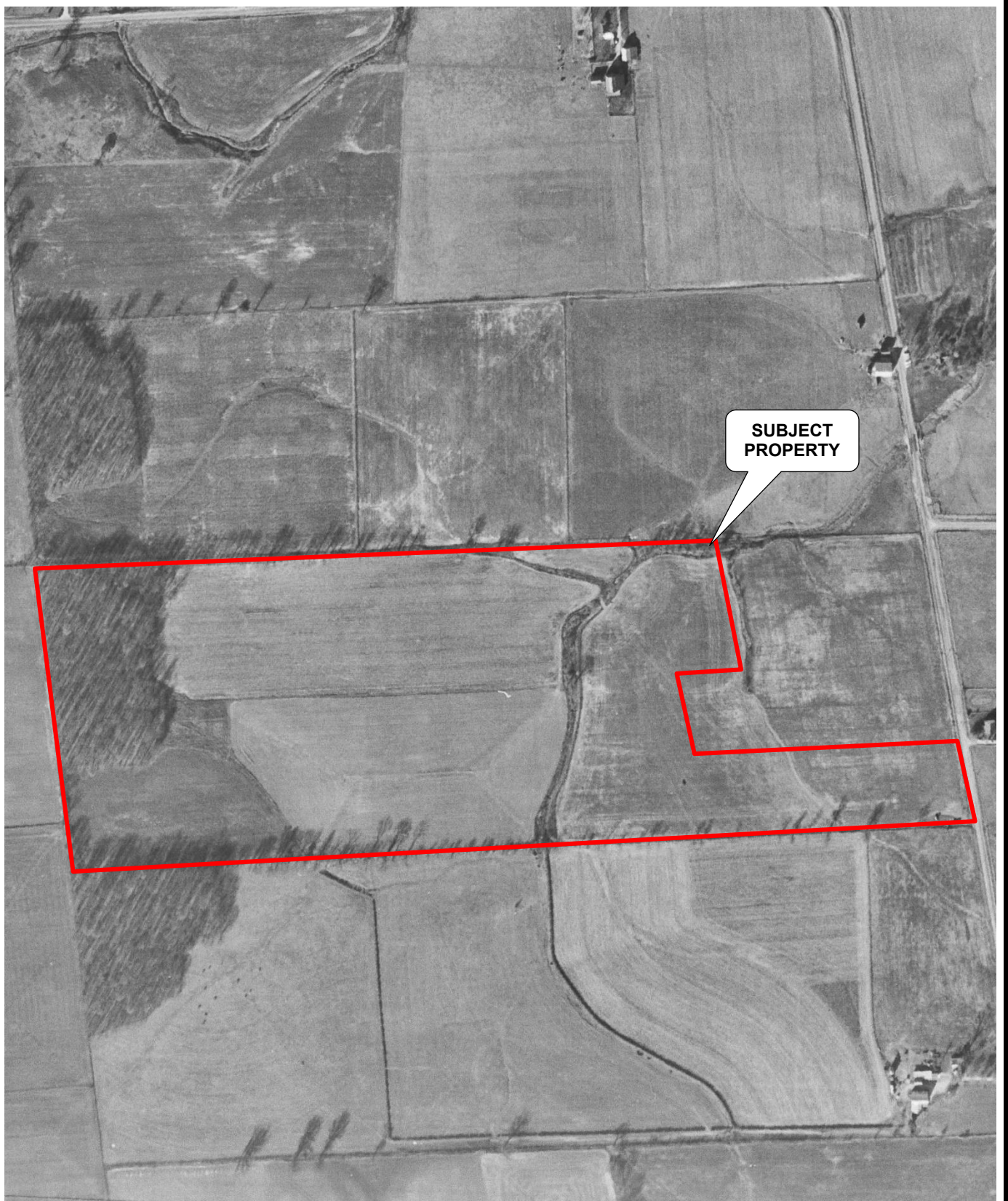




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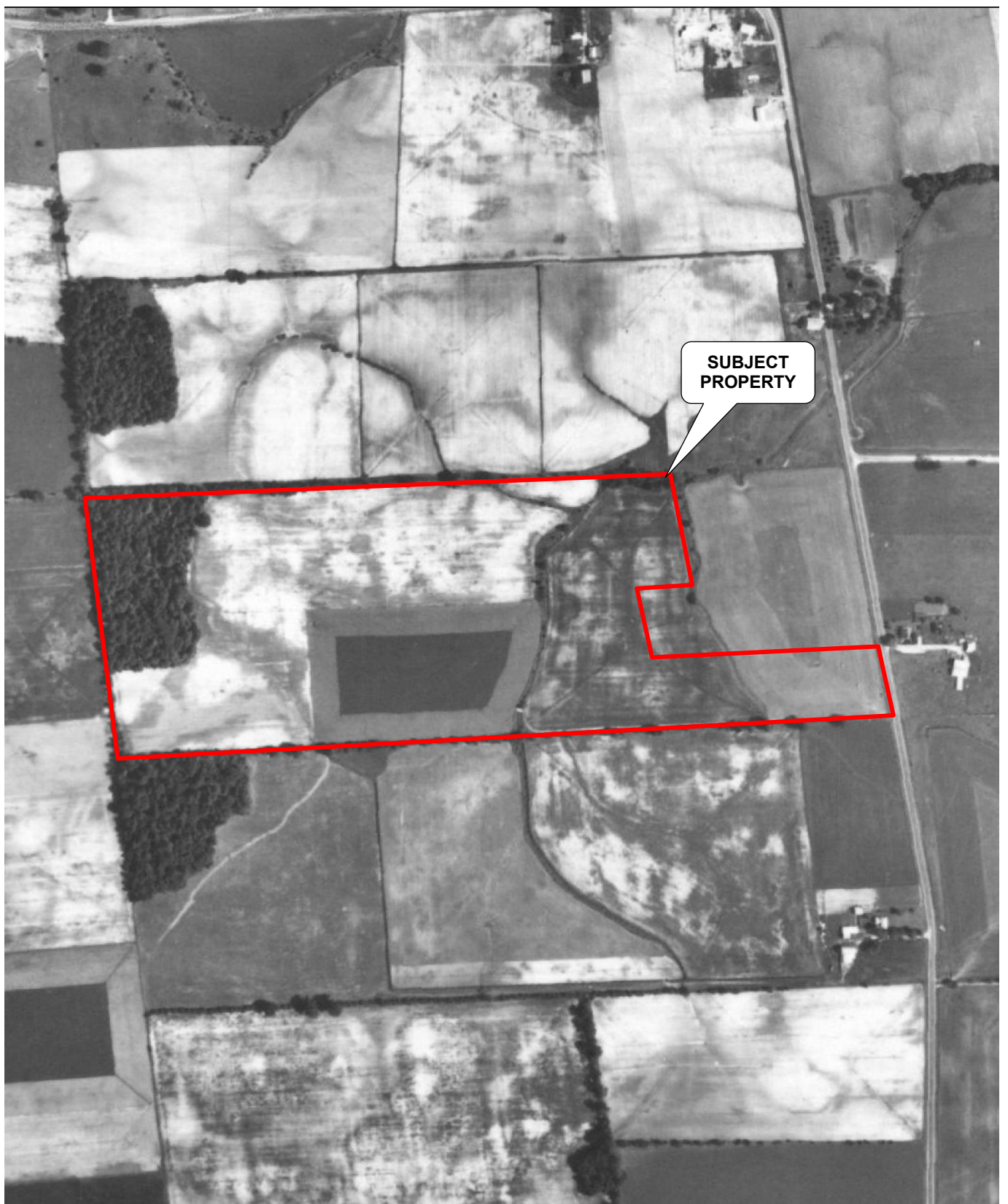




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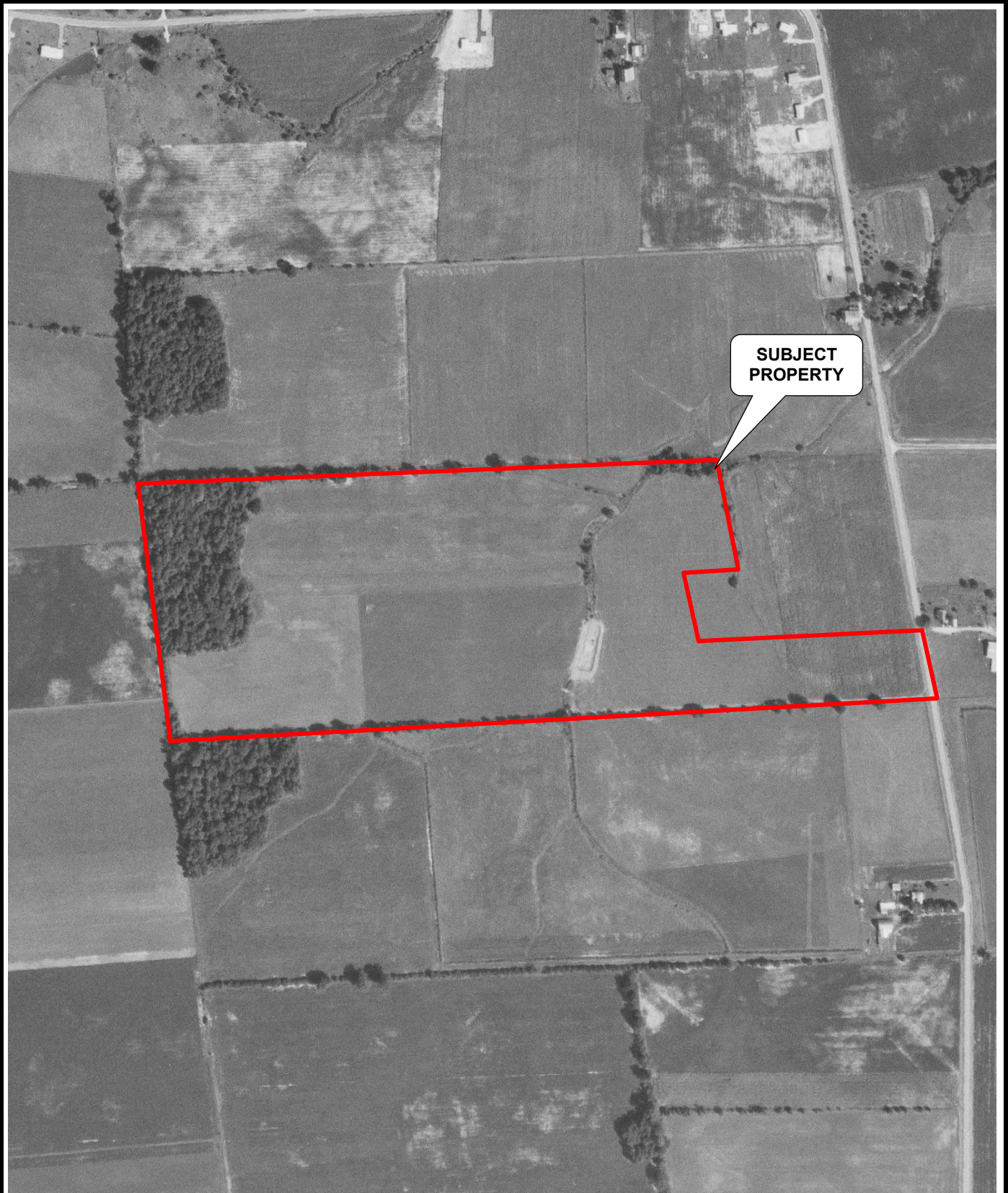




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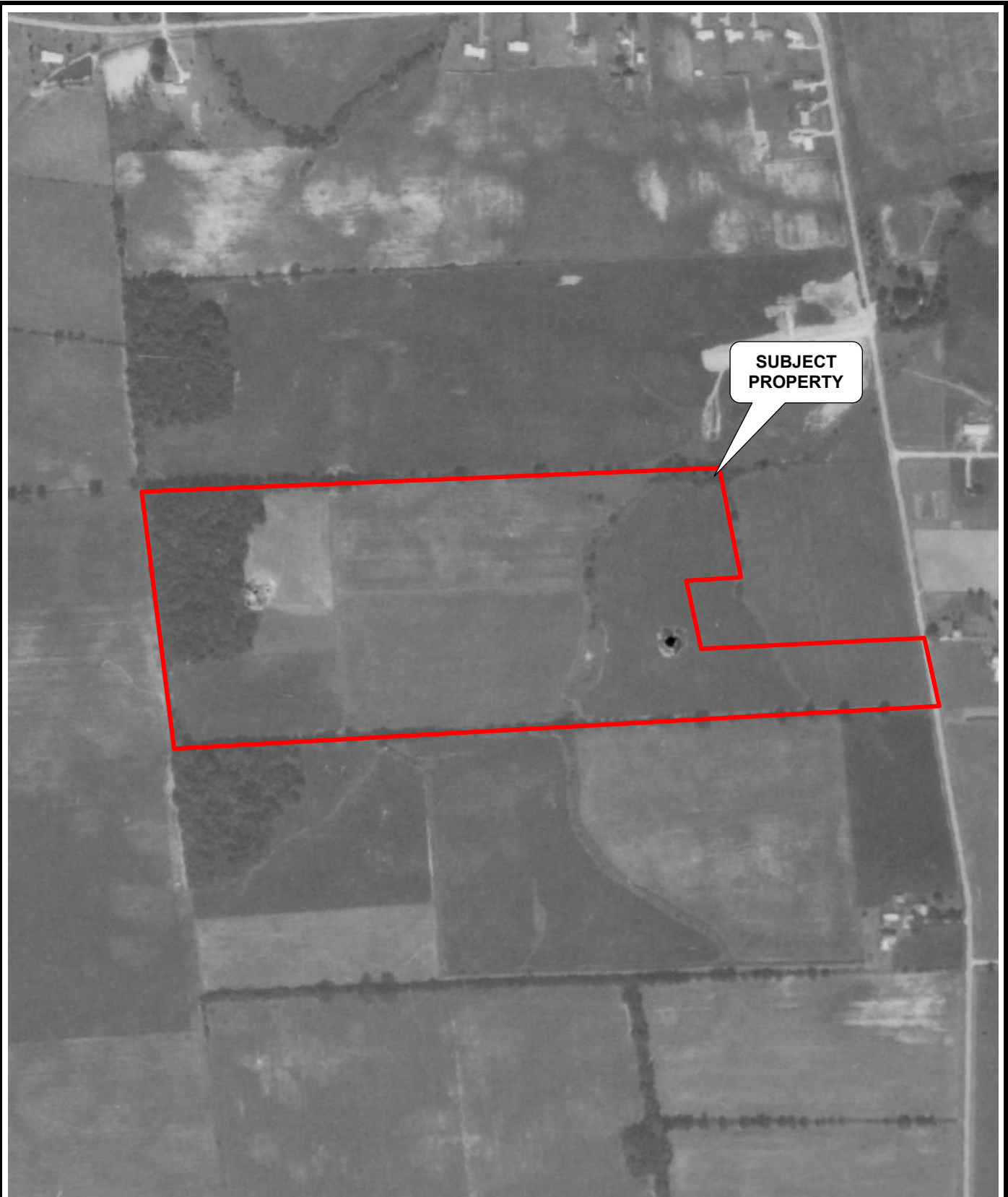




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MARYSVILLE, UNION COUNTY, OHIO**





**PROPOSED BUXTON MEWS RESIDENTIAL DEVELOPMENT
WATKINS ROAD
MARYSVILLE, UNION COUNTY, OHIO**





BUXTON MEWS RESIDENTIAL DEVELOPMENT PROPERTY
WATKINS ROAD
MARYSVILLE, UNION COUNTY, OHIO





North

BUXTON MEWS RESIDENTIAL DEVELOPMENT PROPERTY
WATKINS ROAD
MARYSVILLE, UNION COUNTY, OHIO





Photo 1: Southerly view along a clearing and proposed Hinton Mill Road extension on the northwest part of the property.



Photo 2: Typical view of the wooded northwest part of the property.



Photo 3: Typical view of the wooded west central part of the property.



Photo 4: Southerly view along a clearing and proposed Hinton Mill Road extension on the west central part of the property.



Photo 5: Typical view of the wooded northwest part of the property.



Photo 6: Typical view of the wooded west central part of the property.



Photo 7: Easterly view from the southwest part of the property.



Photo 8: Northerly view across the southwest part of the property.



Photo 9: Northwesterly view across a swale within an agricultural area on the southwest part of the property.



Photo 10: Westerly view from the south central part of the property.



Photo 11: Northerly view along the wooded stream corridor crossing the central part of the property.



Photo 12: Northerly view along a Stream 1 crossing the central part of the property.



Photo 13: Northerly view along a Stream 1 and Wetland 1 on the central part of the property.



Photo 14: Southerly view from the northern part of Wetland 1.



Photo 15: Easterly view from the south central part of the property.



Photo 16: Northerly view from the south central part of the property.



Photo 17: Easterly view across the southeast part of the property.



Photo 18: Northwesterly view across the northeast part of the property.



Photo 19: Westerly view of Pond 3 on the northeast part of the property.



Photo 20: Easterly view of Pond 3 on the northeast part of the property.



Photo 21: Easterly view of Pond 1 on the northeast part of the property.



Photo 22: Northwesterly view of Pond 1 on the northeast part of the property.



Photo 23: Southwesterly view along the eastern berm of Pond 1.



Photo 24: Northwesterly view of Pond 2 on the northeast part of the property.



Photo 25: Southeasterly view of Pond 2 on the northeast part of the property



Photo 26: Westerly view along the north property boundary.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buxton Mews City/County: Marysville/Union Sampling Date: June 27, 2018
 Applicant/Owner: Gary Dodson State: Ohio Sampling Point: DP-1
 Investigator(s): Matt Kaminski Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): till plains Local relief (concave, convex, none): concave
 Slope (%): 2-6 Lat: 40.226723 Long: -83.308795 Datum: Wetland 1
 Soil Map Unit Name: Blount silt loam (Blg1B1) NWI or WWI classification: PEM1C

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

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks: Area is delineated Wetland 1.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____ 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ 3 (A) Total Number of Dominant Species Across All Strata: _____ 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ 100.00 (A/B)																
1. <u>Populus deltoides</u>	10	Y	FAC																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____ 0</td> <td>x 1 = _____ 0</td> </tr> <tr> <td>FACW species _____ 105</td> <td>x 2 = _____ 210</td> </tr> <tr> <td>FAC species _____ 10</td> <td>x 3 = _____ 30</td> </tr> <tr> <td>FACU species _____ 0</td> <td>x 4 = _____ 0</td> </tr> <tr> <td>UPL species _____ 0</td> <td>x 5 = _____ 0</td> </tr> <tr> <td>Column Totals: _____ 115 (A)</td> <td>_____ 240 (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____ 2.09</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____ 0	x 1 = _____ 0	FACW species _____ 105	x 2 = _____ 210	FAC species _____ 10	x 3 = _____ 30	FACU species _____ 0	x 4 = _____ 0	UPL species _____ 0	x 5 = _____ 0	Column Totals: _____ 115 (A)	_____ 240 (B)	Prevalence Index = B/A = _____ 2.09	
Total % Cover of:	Multiply by:																			
OBL species _____ 0	x 1 = _____ 0																			
FACW species _____ 105	x 2 = _____ 210																			
FAC species _____ 10	x 3 = _____ 30																			
FACU species _____ 0	x 4 = _____ 0																			
UPL species _____ 0	x 5 = _____ 0																			
Column Totals: _____ 115 (A)	_____ 240 (B)																			
Prevalence Index = B/A = _____ 2.09																				
Sapling/Shrub Stratum (Plot size: _____ 15')																				
1. <u>Salix alba</u>	10	Y	FACW																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Herb Stratum (Plot size: _____ 5')																				
1. <u>Phalaris arundinacea</u>	95	Y	FACW																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____																
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____	Woody Vine Stratum (Plot size: _____ 30')																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____	Remarks: (Include photo numbers here or on a separate sheet.) Dominance of hydrophytic vegetation satisfies the vegetation criteria for wetlands. Refer to photos 12 through 14 in GCI's Jurisdictional Waters Delineation Report.																
_____	_____	_____	_____																	

SOIL

Sampling Point: DP-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 5/2	90	10YR 5/6	10	C	M	SCL	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Depleted matrix satisfies the hydric soil criteria for wetlands.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☒ Water Marks (B1)
- ☒ Sediment Deposits (B2)
- ☒ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)

- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
Water Table Present? Yes ☐ No ☒ Depth (inches): _____
Saturation Present? Yes ☒ No ☐ Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐


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

Remarks:

Primary and secondary hydrology indicators present that satisfy the hydrology criteria for wetlands.

Background Information

Name:	Matt Kaminski	
Date:	6/27/2018	
Affiliation:	Geotechnical Consultants, Inc.	
Address:	720 Greencrest Drive, Westerville, Ohio 43081	
Phone Number:	614-895-1400	
e-mail address:	mkaminski@gci2000.com	
Name of Wetland:	Wetland 1	
Vegetation Communit(ies):	emergent	
HGM Class(es):	riverine	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. <p>Wetland 1 is located within the corridor of Stream 1 on the central part of Union County parcel 1100120010000. The wetland is located approximately 1,100 feet west of Watkins Road and approximately 600 feet south of Oxford Drive. The approximate coordinates for this wetland are 40.226723 / -83.308795. Refer to GCI's delineation report and jurisdictional waters location maps for additional information of the location of this wetland.</p>		
Lat/Long or UTM Coordinate	40.226723 / -83.308795	
USGS Quad Name	Marysville Ohio	
County	Union	
Township	Dover	
Section and Subsection		
Hydrologic Unit Code	05060001	
Site Visit	6/27/2018	
National Wetland Inventory Map	PEM1C	
Ohio Wetland Inventory Map	N/A	
Soil Survey	Blount silt loam, ground moraine (Blg1B1)	
Delineation report/map	Jurisdictional Waters Location Map	

Name of Wetland: Wetland 1	
Wetland Size (acres, hectares): 0.14 acre	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. <div style="display: flex; justify-content: space-between; font-size: small;"> JURISDICTIONAL WATERS LOCATION MAP GCI PROJECT #18-E-21962-A </div>  <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 10px;"> <div style="text-align: center;">  orth </div> <div style="text-align: center;"> BUXTON MEWS RESIDENTIAL DEVELOPMENT PROPERTY WATKINS ROAD MARYSVILLE, UNION COUNTY, OHIO </div> <div style="text-align: center;">  </div> </div> <div style="font-size: x-small; margin-top: 5px;"> GEOTECHNICAL CONSULTANTS, INC. • 720 GREENCREST DRIVE • WESTERVILLE, OHIO 43081 • 614-895-1400 • FAX 614-895-1171 </div>	
Comments, Narrative Discussion, Justification of Category Changes: Wetland 1 is located along an intermittent/perennial stream between two active agricultural fields. The fields are drained by subterranean tile. The wetland scored 38.0 which falls in the modified category 2 zone.	
Final score : 38	Category: 2

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

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

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	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 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

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

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

Site: Buxton Mews

Rater(s): Matt Kaminski

Date: 6/27/2018

1	1
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

2	3
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

23	26
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

14	40
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

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

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

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

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

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

40
subtotal this page

Wetland 1

ORAM v. 5.0 Field Form Quantitative Rating

Site: Buxton Mews	Rater(s): Matt Kaminski	Date: 6/27/2018
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40

subtotal first page

0

40

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

38

max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

38

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

Wetland 1

		circle answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES 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	2	
	Metric 3. Hydrology	23	
	Metric 4. Habitat	14	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersions, microtopography	-2	
	TOTAL SCORE	38	Category based on score breakpoints Modified Category 2

Complete Wetland Categorization Worksheet.

Wetland 1

Wetland Categorization Worksheet

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

Final Category			
Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.