

June 9, 2017 File: 173408782

Attention: Teresa Spagna U.S. Army Corps of Engineers 502 Eighth Street Huntington, WV 25701-2070 304-399-5210

Dear Ms. Spagna,

Reference: Vinmar Village Project

Stantec Consulting Services Inc. (Stantec) is acting as the agent for Vinmar Investment Limited for the proposed Vinmar Village Project (Project). The Project is located on 75 acres west of South Old 3C Highway and north of Mariposa Drive in Westerville, Delaware County, Ohio.

Please review the enclosed Wetland and Waterbody Delineation Report (Attachment A) and Preliminary Jurisdictional Determination Form (Attachment B) for this Project. Three wetlands totaling 0.58 acres and two streams totaling 2,240 linear feet were delineated in the Project area. Stantec requests your concurrence with our findings.

If you have any questions concerning this Project, please feel free to contact me either by phone or by email. Thank you very much for your assistance.

Regards,

Stantec Consulting Services Inc.

Jennifer Nietz Ecologist

Phone: 614-643-4389 Fax: (614)-485-5016

Jennifer.Nietz@stantec.com

Attachment: Attachment A: Delineation Report

Attachment B: Preliminary Jurisdictional Determination Form



Attachment A Delineation Report

Vinmar Village Wetland and Waterbody Delineation Report

Genoa Township, Delaware County, Ohio



Prepared for: Vinmar Investment Limited

Prepared by: Stantec Consulting Services Inc.

Project No.: 173409307

June 9, 2017

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Sign-off Sheet

This document entitled Vinmar Village Wetland and Waterbody Delineation Report was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Vinmar Investment Limited (the "Client"). The material in it reflects Stantec's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Stantec Consulting Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Prepared by

(signature)

Angela Sjollema

Reviewed by

(signature)

Michelle Kearns

Reviewed by

(signature)

Bruce Jones



Introduction June 9, 2017

1.0 INTRODUCTION

1.1 PURPOSE

Vinmar Investment Limited is proposing to develop a 75-acre site (the Project area) into a single-family neighborhood containing 90 homes. The site will be developed in accordance with Genoa Township's Planned Residential District (PRD) standards, which require at least 40% of the site to be green space.

Stantec was retained by Vinmar Investment Limited to conduct a delineation of potential waters of the United States (WOUS), including wetlands, and potentially isolated wetlands, within the Project area. The purpose of this delineation was to identify potential jurisdictional features which occur within the Project area. Stantec completed the delineation of wetlands and waterbodies on May 19, 2017 and this report reflects those findings.

Stantec's opinion regarding the presence/absence of jurisdictional WOUS and isolated wetlands is preliminary in nature. Only the U.S. Army Corps of Engineers (USACE) can provide an official determination of the presence and extent of jurisdictional WOUS. Wetlands that are considered WOUS are subject to regulation under Section 404 of the Clean Water Act (CWA) and the jurisdictional regulatory authority lies with the USACE. Additionally, the Ohio Environmental Protection Agency (OEPA) has regulatory authority over isolated wetlands under Ohio Revised Code 61111.021. Stantec will contact the OEPA and USACE, on behalf of Vinmar Investment Limited, for final jurisdictional review and concurrence with Stantec's opinion regarding the presence/absence of WOUS on the property. This should be completed prior to Vinmar Investment Limited starting construction activities associated with this Project area.

1.2 LOCATION OF PROJECT

The approximately 75-acre Project area is located north of Mariposa Drive between State Highway 3 and South Old 3C Highway in Genoa Township, Delaware County, Ohio (Appendix A, Figure 1). The Project area is depicted on the Galena, Ohio Quadrangle U.S. Geological Survey (USGS) 7.5-minute series topographic map and the approximate center of the Project area is at 40.191081° N latitude and -82.903144° W longitude. The Project area drains into Hoover Reservoir – Big Walnut Creek.



Study Methods June 9, 2017

2.0 STUDY METHODS

2.1 WETLAND DEFINITION

Wetlands, for the purpose of this study, were defined per the "Corps of Engineers Wetlands Delineation Manual" (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (USACE 2010). The definition of wetlands in this manual is:

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

This definition addresses three characteristics of wetlands: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology.

2.2 WETLAND CLASSIFICATION

Wetlands were classified according to "Classification of Wetlands and Deepwater Habitats of the United States" (Cowardin et al. 1979). In this classification system, wetland habitats are divided into five major systems including: (1) Marine, (2) Estuarine, (3) Lacustrine, (4) Palustrine, and (5) Riverine. Each of these systems is further divided into subsystems, classes, and subclasses.

2.3 IDENTIFICATION AND DELINEATION OF WATERS

The Galena, Ohio 7.5-minute Series USGS topographic map (Appendix A, Figure 1), Soil Survey of Delaware County, Ohio (Appendix A, Figure 2) and National Wetlands Inventory data (Appendix A, Figure 3) were reviewed to assess the likelihood of occurrence and probable location of wetlands and waterbodies within the Project area (USDA NRCS 2016, USFWS NWI 2016).

Following this desktop review, Stantec performed on-site reconnaissance and data collection on May 19, 2017. The objectives of this effort were to: (1) characterize the vegetation, (2) classify the soils with respect to hydric soil indicator status, (3) inspect hydrology, and (4) based on these data, assess whether potential WOUS and/or isolated wetlands were present in the Project area. Stantec collected data and completed relevant assessment forms, which included: Headwater Habitat Evaluation Index (HHEI) forms, USACE Wetland Determination Forms (WDF), and Ohio Rapid Assessment Method v 5.0 forms (ORAM). Datasheets are provided in Appendix B.

2.4 WETLAND DELINEATION

Wetland boundaries were assessed using the "Routine On-site Determination Method" as described in the USACE Wetland Delineation Manual (USACE 1987) and the Regional Supplement



Overview of Project Area June 9, 2017

to the Corps of Engineers Wetland Delineation Manual: Midwest (Version 2.0; USACE 2010). As of August 17, 1991, the USACE was directed to utilize the USACE Wetland Delineation Manual (USACE 1987) to identify and delineate wetlands potentially subject to regulation under Section 404 of the CWA. Vegetative communities were inventoried to assess the dominant plant species in each of four vegetative layers: trees, saplings/shrubs, herbs, and woody vines. The wetland indicator status for each of the dominant species was obtained using the 2016 National Wetland Plant List (Lichvar et al. 2016). The wetland soil indicators were obtained using the Munsell soil-color chart (Munsell 2009) and the hydric soil field indicators (USDA 2010). The uppermost wetland boundary and sampling points were identified and surveyed using a handheld Global Positioning System (GPS) unit and mapped with Geographical Information System (GIS) software.

2.5 STREAM DELINEATION

Streams that demonstrated a defined channel (bed and bank), ordinary high watermark (OHWM), and the disturbance of terrestrial vegetation were delineated within the Project Area (USACE 2005). Delineated streams were classified as ephemeral, intermittent, or perennial per definition in the Federal Register/Vol. 67, No. 10 (USACE 2002). Functional assessment of streams within the Project Area was based on completion of the OEPA's HHEI and/or QHEI forms. The centerline of each waterway was identified and surveyed using a handheld GPS unit and mapped with GIS software.

2.6 OPEN WATER DELINEATION

Open water boundaries were assessed using the definition described in the "Classification of Wetlands and Deepwater Habitats of the United States" (Cowardin et al. 1979) which includes wetland and deepwater habitats with most of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with greater than 30 percent areal coverage; and (3) total area exceeds eight (8) hectares (ha; 20 acres). Similar wetland and deepwater habitats totaling less than eight (8) ha (20 acres) are also included in the Lacustrine System if an active wave-formed or bedrock shoreline feature makes up most or part of the boundary, or if the water depth in the deepest part of the basin exceeds two (2) meters (6.6 feet) at low water (estimated).

3.0 OVERVIEW OF PROJECT AREA

3.1 GEOLOGY AND TOPOGRAPHY

The Project area is in Delaware County and lies within the Till Plains section of the Central Lowlands physiographic province. The Project area lies within the Central Ohio Clayey Till Plain region, which is characterized by: (1) surface of clayey till, (2) well defined moraines with intervening flat-lying ground moraine and intermorainal lake basins, (3) no boulder belts, and (4) about a dozen silt-, clay-, and till-filled lake basins range in the area. The elevation ranges from 700–1,150 feet. The



Overview of Project Area June 9, 2017

geology of the area includes clayey, high-lime Wisconsinan-age till from a northeastern source (Erie glacial lobe) and lacustrine materials over Lower Paleozoic-age carbonate rocks and, in the east, shales. Loess is thin to absent in this area (ODGS 1998).

3.2 CLIMATE

The average winter temperature in Delaware County is 27° F, and the average daily minimum temperature is 18° F. The average summer temperature is 70° F and the average daily maximum temperature is 82° F. Precipitation in Delaware County averages 37.23 inches per year but varies widely from year to year. Generally, it is abundant and well distributed but most frequently occurs from March through September (USDA 1998).

3.3 SOILS

The Soil Survey of Delaware County, Ohio (USDA 1998) and the Natural Resources Conservation Service (NRCS) Web Soil Survey were consulted to assess soil types within the Project area (USDA NRCS 2016). A copy of the soil map is included in Appendix A, Figure 2. Soils identified within or near the Project area included Bennington silt loam, 0 to 2 percent slopes (BeA), Bennington silt loam, 2 to 6 percent slopes (BeB), Condit silt loam, 0 to 1 percent slopes (CnA), Cardington silt loam, 2 to 6 percent slopes (Crd1B1), and Pewamo silty clay loam, 0 to 1 percent slopes (PwA). The BeA, BeB, and Crd1B1 soils are classified as partially hydric while the CnA and the PwA soils are predominately hydric soils. The percentages of the soils identified within the Project area can be found in Table 1.



Results/Existing Conditions June 9, 2017

Table 1. Soil Types Known to Occur within the Vinmar Village Project Area, Genoa Township, Delaware County, Ohio

	Delaware County, Ohio										
Map Unit Symbol	Map Unit Name	Acres in Area of Interest	Percent Area of Interest								
BeA	Bennington silt loam, 0 to 2 percent slopes	47.4	63.34%								
BeB	Bennington silt loam, 2 to 6 percent slopes	0.0	0.01%								
CnA	Condit silt loam, 0 to 1 percent slopes	0.3	0.35%								
Crd1B1	Cardington silt loam, 2 to 6 percent slopes	1.0	1.32%								
PwA	Pewamo silty clay loam, 0 to 1 percent slopes	26.3	35.06%								
Totals fo	or Area of Interest	75.0 acres	100.00%								

4.0 RESULTS/EXISTING CONDITIONS

4.1 EXISTING CONDITIONS

The Project area consists of an agricultural row crop field, early successional forest, old field, and second growth deciduous forest.

4.2 UPLAND HABITAT

The majority of the Project area consists of an agricultural row crop field (Appendix A, Figure 4). No crops were planted at the time of field visit. Adjacent to the agricultural field on the east side is an old field area dominated by reed canary grass (*Phalaris arundinacea*) and Kentucky bluegrass (*Poa palustris*). The early successional habitat is also located on the east side of the Project and is dominated by black locust (*Robinia pseudoacacia*) and Japanese honeysuckle (*Lonicera japonica*). The secondary growth deciduous habitat is along the perimeter of the Project area as fence rows. The sparse ground cover consists of poison ivy (*Toxicodendron radicans*), Virginia creeper (*Parthenocissus quinquefolia*), Canada goldenrod (*Solidago canadensis*), and spotted touch-me-not (*Impatiens capensis*). The overstory trees are dominated by silver maple (*Acer saccharinum*) and pin oak (*Quercus palustris*).



Results/Existing Conditions June 9, 2017

4.3 WETLAND HABITAT

Two NWI-mapped palustrine emergent (PEM) wetlands are within the Project boundary. NWI wetland PEM1C was field delineated by Stantec in the center of the Project area and named Wetland 3 (Appendix A – Figures 3 and 4). This wetland was field determined to be a palustrine forested community (PFO). Wetland PEM1A was shown on NWI mapping on the north side of the Project area (Appendix A – Figure 3). The location of the NWI-mapped PEM1A wetland was tilled and actively farmed. This area was field delineated by Stantec as Upland (UPL) (Appendix A – Figure 4).

Stantec identified three wetlands within the Project area totaling 0.57 acre (Appendix A, Figure 4). Appendix B contains the USACE WDFs and the ORAMs for the wetlands identified within the Project area. Representative photographs of the wetlands are provided in Appendix C. Each wetland is described below and summarized in Table 2.

Wetland 1

Wetland 1 is a PEM wetland approximately 0.08 acre in size. Functional assessment (ORAM) of Wetland 1 yielded a score of 8 and identifies this wetland as a Category 1 wetland, indicating it is a wetland of "poor" quality. Category 1 wetlands generally support minimal wildlife habitat, and minimal hydrological or recreational functions. A WDF (SP01) was completed and the predominate soil colors presented as a Depleted Matrix indicator (F3), with eight inches of low chroma (10YR 4/2) matrix color and redox concentrations (7.5YR 6/8) in the matrix. Hydrological indicators included saturation to the surface, water-stained leaves, and the FAC-neutral Test as a secondary indicator. Vegetation identified within the wetland sample plot was dominated by reed canary grass (FACW) and other hydrophytic vegetation.

Wetland 2

Wetland 2 is a PFO wetland approximately 0.07 acre in size. Functional assessment (ORAM) of Wetland 2 yielded a score of 26 and identifies this wetland as a Category 1 wetland, indicating it to be a wetland of "poor" quality. Category 1 wetlands generally support minimal wildlife habitat, and minimal hydrological or recreational functions. A WDF (SP03) was completed and the predominate soil colors presented as Redox Dark Surface indicator (F6), with 18 inches of low chroma (10YR 3/2) color and redox concentrations (5YR 4/6) in the matrix. Hydrological indicators included saturation to the surface, water-stained leaves, and crayfish burrows. Vegetation identified within the wetland sample plot was dominated by hydrophytic vegetation including pin oak (FACW), silver maple (FACW), American elm (Ulmus americana; FACW), and sweet woodreed (Cinna arundinacea; FACW).



Results/Existing Conditions June 9, 2017

Wetland 3

Wetland 3 is a PFO/palustrine unconsolidated bottom (PUB) wetland totalling approximately 0.43 acre in size. The PUB portion of the wetland is approximately 0.21 acres in size with the PFO wetland forming a perimeter around the open water. The PFO portion of the wetland is approximately 0.22 acres in size. Functional assessment (ORAM) of Wetland 3 yielded a score of 45 and identifies this wetland as a Category 2 wetland, indicating it to be a wetland of "fair/moderate" quality. Category 2 wetlands generally support moderate wildlife habitat, and moderate hydrological or recreational functions. A WDF (\$P05) was completed and the predominate soil colors presented as Redox Dark Surface indicator (A11), with three inches of low chroma (10YR 3/1) color and redox concentrations (2.5YR 4/6) in the pore linings on the surface and the next five inches of low chroma (10YR 3/1) matrix color with redox concentrations (2.5YR 4/8) in the matrix. Hydrological indicators included surface water, high water table, saturation to the surface, water-stained leaves, and the FAC-neutral test as a secondary indicator. Vegetation identified within the wetland sample plot was dominated by hydrophytic vegetation including pin oak (FACW), black willow (Salix nigra; OBL), and Frank's sedge (Carex frankii; OBL).

4.4 STREAM HABITAT

Stantec identified two streams within the Project area, including 1,085 linear feet of ephemeral channel and 1,155 linear feet of intermittent channel, totaling 2,240 linear feet (Appendix A, Figure 4). Appendix B provides datasheets and photographs are provided in Appendix C. Descriptions and Table 2 below provide a summary of the streams identified within the Project area.

Stream 1

Stream 1 is interpreted by Stantec to be an ephemeral stream. Approximately 1,085 linear feet of this stream was identified within the Project area. Functional assessment (HHEI) yielded a value of 36 classifying it as a Class I PHWH stream. Class I PHWH streams generally have little or no aquatic life potential, except seasonally when flowing water is present. Stream 1 bankfull width is 5.5 feet, with a bankfull depth of one foot. The stream was flowing at the time of the site visit. The substrates were primarily silt and sand.

Stream 2

Stream 2 is interpreted by Stantec to be an intermittent stream. Approximately 1,155 linear feet of this stream was identified within the Project area. Functional assessment (HHEI) of Stream 2 yielded a value of 46, classifying it as a Class II PHWH. Class II PHWH streams generally exhibit moderately diverse communities of warm water adapted native fauna present either seasonally or year-round. Stream 2 bankfull width is an estimated 6.25 feet, with a bankfull height of approximately three feet. The stream was flowing at the time of the visit. Substrates were primarily silt and sand.



Conclusion June 9, 2017

Table 2. Potential WOUS Identified in the Vinmar Village Project Area, Genoa Township, Delaware County, Ohio

Feature	Classification	Total						
reditire	Classification	Linear Footage	Acreage					
Wetland 1	PEM	-	0.08					
Wetland 2	PFO	-	0.07					
Wetland 3	PFO/PUB	-	0.22/0.21					
Stream 1	Ephemeral	1,085	-					
Stream 2	Intermittent	1,155	-					
Total Delineated Wetlar	Total Delineated Wetland							
Total Delineated Stream	n Channel		2,240 linear feet					

^{- =} Not Applicable

5.0 CONCLUSION

Stantec conducted a delineation of potential WOUS, including wetlands, within the Project area located in Genoa Township, Delaware County, Ohio. The objective of the wetland and waterbody delineation was to identify the extent and spatial arrangement of potential jurisdictional wetlands and waterbodies within the Project area.

One PFO wetland, one PFO/PUB wetland, one PEM wetland, and two streams were identified within the Project area in accordance with state and federal guidelines. A combined total of approximately 0.58 acre of delineated wetlands and 1,085 linear feet of ephemeral, and 1,155 linear feet of intermittent stream totaling 2,240 linear feet were identified within the Project area. All three wetlands identified within the Project area have been interpreted by Stantec to be potentially isolated wetlands.

Stantec's opinion regarding the presence/absence of jurisdictional WOUS and isolated wetlands is preliminary in nature. Only the USACE can provide an official determination of the presence and extent of jurisdictional WOUS. Wetlands that are considered WOUS are subject to regulation under Section 404 of the CWA and the jurisdictional regulatory authority lies with the USACE. Additionally, the OEPA has regulatory authority over isolated wetlands under Ohio Revised Code 61111.021. Stantec will contact the OEPA and USACE, on behalf of Vinmar Investment Limited, for jurisdictional review and concurrence with Stantec's opinion regarding the presence/absence of WOUS on the property. This should be completed prior to Vinmar Investment Limited starting construction activities associated with this Project area.



Literature Cited June 9, 2017

6.0 LITERATURE CITED

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United States Fish and Wildlife Service National Wetlands Inventory (USFWS NWI). 2017. http://www.fws.gov/wetlands/Data/Mapper.html. Accessed 17 May 2017.

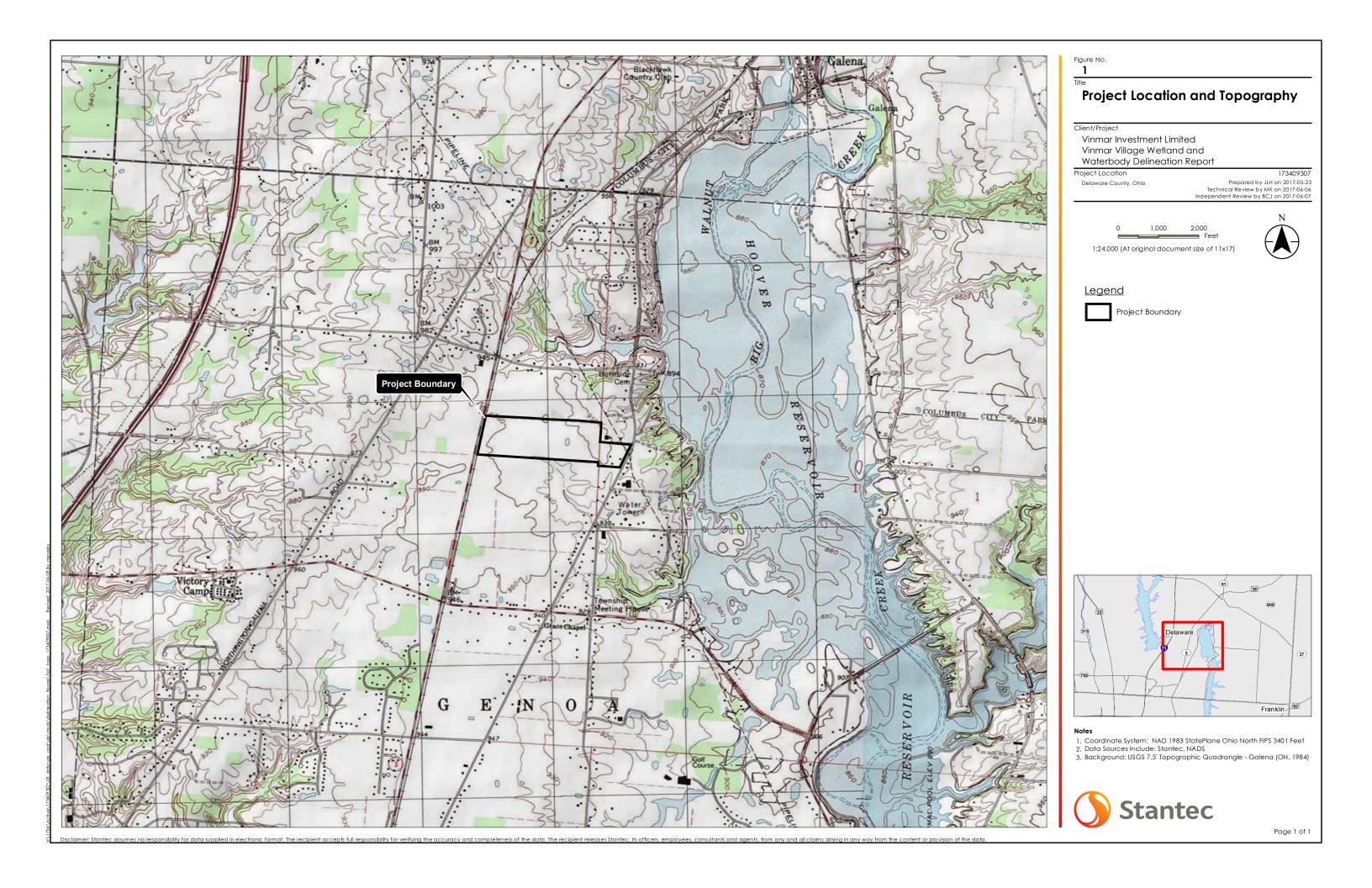


Appendix A June 9, 2017

Appendix A

Maps and Figures







NRCS Soil Survey Data Hydric Ratings

Vinmar Investment Limited Vinmar Village Wetland and Waterbody Delineation Report

Project Location

Delaware County, Ohio

173409307 Prepared by JLH on 2017-04-12 Technical Review by MK on 2017-06-06 Independent Review by BCJ on 2017-06-07

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<u>Legend</u>

Project Boundary NRCS Soil Survey Data

Hydric Ratings

Predominantly Hydric Soil

Partially Hydric Soil Non-Hydric Soil

National Hydrography Dataset

Perennial Stream

Intermittent Stream

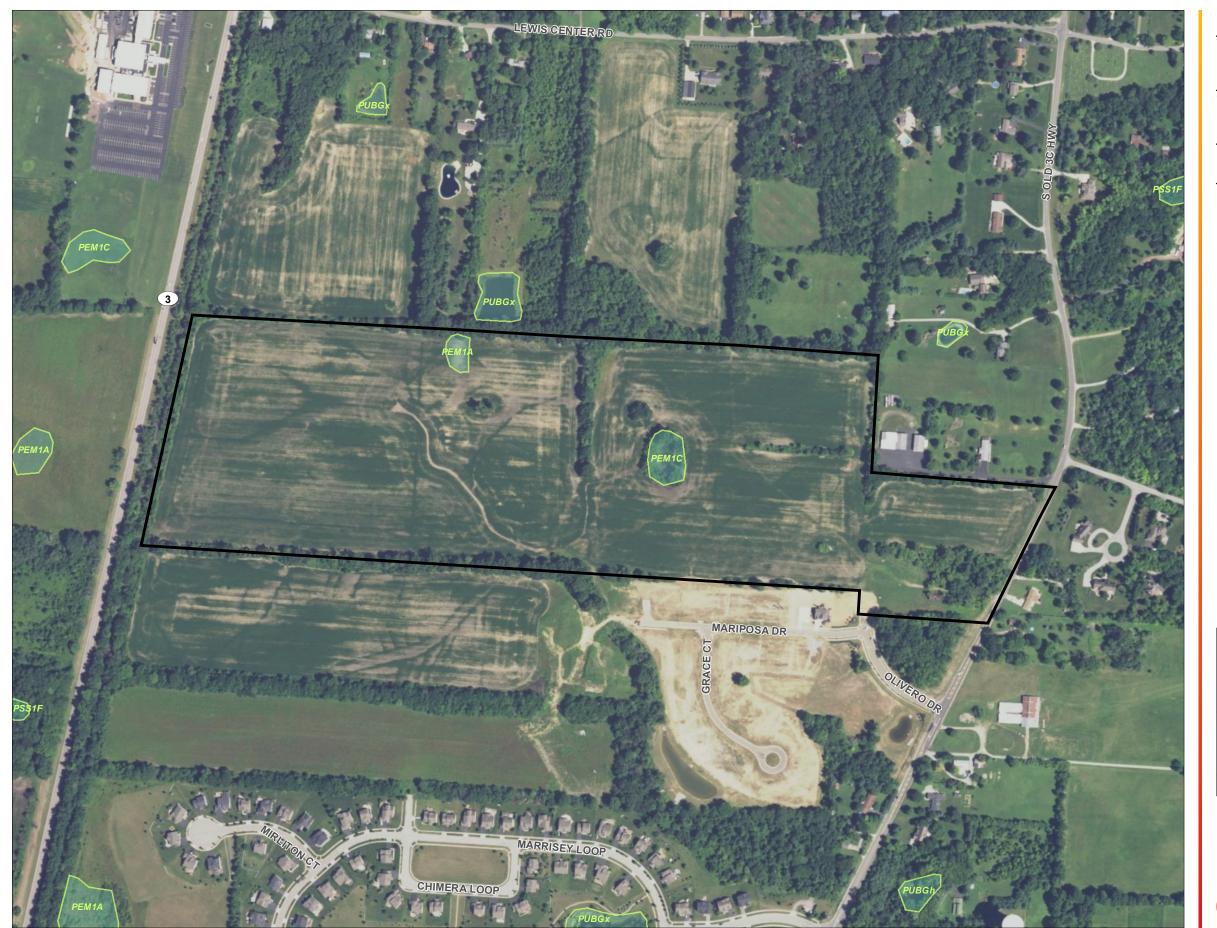
Waterbody



- Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
 Data Sources Include: Stantec, NADS, USGS, NRCS, OGRIP
 Orthophotography: NAIP 2015



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National Wetlands Inventory Data

Client/Project

Vinmar Investment Limited Vinmar Village Wetland and Waterbody Delineation Report

Project Location

Delaware County, Ohio

173409307 Prepared by JLH on 2017-04-12 Technical Review by MK on 2017-6-6 Independent Review by BCJ on 2017-06-07

1:4,800 (At original document size of 11x17)



<u>Legend</u>

Project Boundary

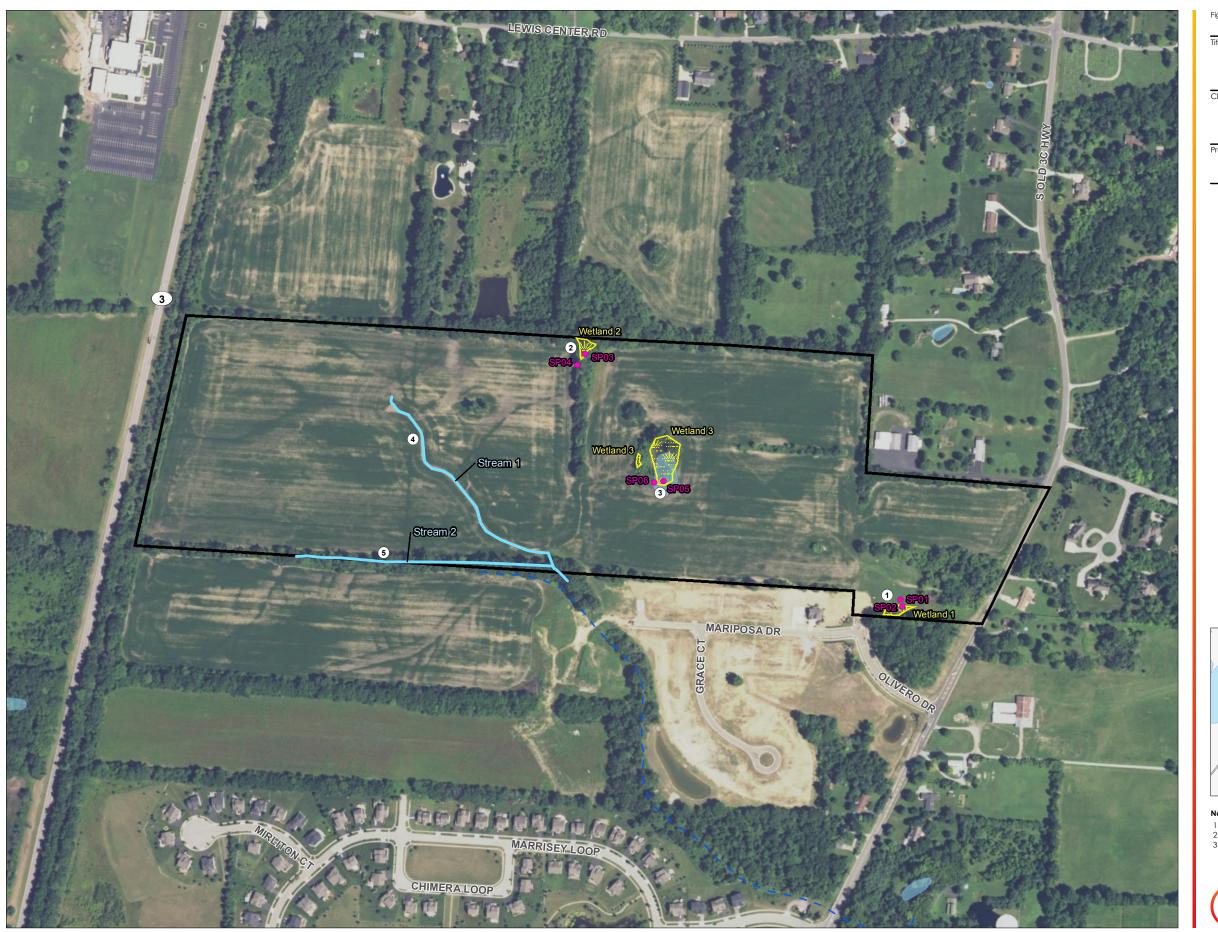
National Wetlands Inventory Feature

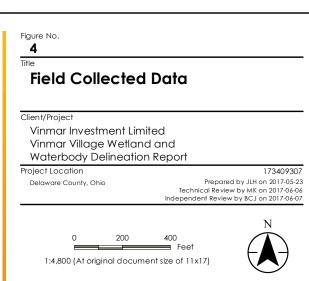


- Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
 Data Sources Include: Stantec, NADS, USGS, USFWS, OGRIP
 Orthophotography: NAIP 2015



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<u>Legend</u>

Project Boundary

Sample Point

O Photo Location

Field Delineated Waterway

Field Delineated Wetland

National Hydrography Dataset

Perennial Stream

Intermittent Stream

Waterbody



- Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
 Data Sources Include: Stantec, NADS, USGS, USFWS, OGRIP
 Orthophotography: NAIP 2015



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Appendix B June 9, 2017

Appendix B

Data Forms



Appendix B June 9, 2017

HHEI Forms



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

SITE NAME/LOCATION Vin mar Villiage SITE NUMBERSTREAM RIVER BASIN DRAINAGE AREA (mi²) < _ \]	Mi2
LENGTH OF STREAM REACH (ft) 200 LAT. 40.1900 ONG. 82.90+35 RIVER CODE RIVER MILE DATE 5/19/17 SCORER J. Nietz COMMENTS & Plantal	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruc	ctions
STREAM CHANNEL DNONE/NATURAL CHANNEL DRECOVERED DRECOVERING RECENT OR NO RECOVER MODIFICATIONS: Stream located in ag field , straightened/exampled.	and the second
	HHEI Metric Points Substrate Max = 40
COOKE OF TWO WOOT PRESENTANCE TO SEE THE COOKE OF THE COO	
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]	Pool Depth Max = 30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts]	Bankfull Width
□ > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] □ ≤ 1.0 m (≤ 3' 3") [5 pts] > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]	Max=30
COMMENTS 5.5 AVERAGE BANKFULL WIDTH (meters)	au I
	Anna Constitution
This information <u>must</u> also be completed	Anna Caraca Cara
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m	in a laborated
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m	(Manual Superson)
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m	(manufactures)
RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH RIPARIAN WIDTH FLOODPLAIN QUALITY	
RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Most Channel, isolated pools, no flow (Intermittent) Most Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	

QHEI PERFORMED	0? - ☐ Yes 📈 No QHEI Score(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DE	ESIGNATED USE(S) N/A-Hoover Reservoir is downstream O.(
J. AAAALI IASIIIG.	Distance from Evaluated Gream
	Distance from Evaluated Stream Distance from Evaluated Stream
200	I COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
_	
JSGS Quadrangle Name: 6	
County: Delawo	Township/city: Genoa Township
MISCELLANEOUS	V
	Date of last precipitation: 5/19/17 Quantity: 0.47*
Photograph Information:(pstream, downstream, substrates
	(% open): 100% open
Were samples collected for wa	ater chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C)) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
	ntative of the stream (Y/N) If not, please explain:
s the sampling reash represen	Transfer of the Streeth (1717) If her, preuse explain.
7	Marian Harri Cald Turacc
Additional comments/description	on of pollution impacts: Agricultural field runoff
Frogs or Tadpoles Observed?	(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) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	
DRAWING AI	ND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):
Include Important land	lmarks and other features of interest for site evaluation and a narrative description of the stream's location
	Ag field
7	hanned /tg till
11	pool/some flow pool
	pool some flow
FLOW	The Day of
	Pool
	CTI
	riffla
	V (20)
	HA LINIA

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

SITE NAME/LOCATION Vin mar Villiage SITE NUMBERSTROW 2 RIVER BASIN DRAINAGE AREA (mi²) D.C.	
)4mi
LENGTH OF STREAM REACH (#) 200 LAT. 40.189818 LONG 82.9048 LRIVER CODE RIVER MILE	
DATE 5/19/17 SCORER J. Nietz COMMENTS Intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructi	ions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER	RY
MODIFICATIONS: located in fence row, channel straintened/modified	
	_
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
DEPOCENT TYPE PERCENT IV	/letric
BLDR SLABS [16 pts] SILT [3 pt]	oints
	ubstrate
BEDROCK [16 pt]	Max = 40
GRAVEL (2-64 mm) [9 pts]	11
SAND (<2 mm) [6 pts] O ARTIFICIAL [3 pts]	
	A + B
Bldr Slabs, Boulder, Cobble, Bedrock()	
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES:	
7. Waxiiilliii Fuui Deptii imeasure ale maximam poor deptii muum tiio or motor (200 ry oralization 1700).	ool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): March March	Max = 30
> 22.5 - 30 cm [30 pts]	15
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	
COMMENTSMAXIMUM POOL DEPTH (centimeters):	
5. DANK FOLL WID IN (Wedshied as the average of 5-4 medshiements)	Bankfull
> 4.0 meters (> 13) 130 pts (Width Max=30
> 1.5 m - 3.0 m (> 4'8" - 9'7") [20 pts]	The state of the s
	n - 1
COMMENTS 6.25 AVERAGE BANKFULL WIDTH (meters)	ने०
COMMENTS 6.25 AVERAGE BANKFULL WIDTH (meters)	20
This information <u>must</u> also be completed	20
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	20
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R	20
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m	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) L R (Most Predominant per Bank) L R Wide >10m	30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m	20
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m	20
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m	20
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	20
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	20
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream and RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field Residential, Park, New Field Residential, Park, New Field Residential, Park, New Field Roopen Pasture, Row Crop Mining or Construction 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)	20
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY &NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m	20
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	20
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY &NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m	20
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Mide > 10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Narrow < 5m Residential, Park, New Field Open Pasture, Row Crop None COMMENTS FLOW REGIME (At Time of Evaluation) Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) None 1.0 Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY) one box): None 1.0 3.0	20

	Score(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) NA	-Horover Reservair is downstream
☐ WWH Name:	Distance from Evaluated Stream
☐ EWH Name:	Distance from Evaluated Stream
	DING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Galena, DH	NRCS Soil Map Page: NRCS Soil Map Stream Order
	Township/city_Genoa Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precip	oitation: 5/19/17 Quantity: 0.47"
Photograph Information: Upstream, da	onstream, substrates
Elevated Turbidity? (Y/N):/ Canopy (% oper	n): 1070
Were samples collected for water chemistry? (Y/N):	(Note lab sample no. or id. and attach results) Lab Number:
	n (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N)	If not, please explain:
Additional comments/description of pollution impacts:	griculture and residential run of
BIOTIC EVALUATION	
	ions. Voucher collections optional. NOTE: all voucher samples must be labeled with the site riate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Sal	
Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N)	Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESC	CRIPTION OF STREAM REACH (This must be completed):
Include important landmarks and other features o	of interest for site evaluation and a narrative description of the stream's location
7	· · · · · · · · · · · · · · · · · · ·
	A STATE OF THE STA
	forest
FLOW	Tures
	Sult.
	forest of large cottonwoods
residential	* *

Appendix B June 9, 2017

Wetland Determination Forms





WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site:	Vinmar Villa						Stantec Project #:	173409307		Date:	05/19/17
Applicant:		estment Limited								County:	Delaware
Investigator #1:				Investi	gator #2:			N1/A		State:	Ohio
Soil Unit: Landform:		ngton silt loam 0-2%	siopes	Loc	al Relief:		IWI/WWI Classification:	N/A			Wetland 1
Slope (%):	Depression 0	Latitude:	40 1902		ongitude:			Datum:	WGS 1984	Sample Point: Community ID:	
		ditions on the site ty						✓ Yes □	No	Section:	
		or Hydrology □ sig				(II IIO, expia	Are normal circumsta			Township:	Genoa
		or Hydrology □ nat					✓ Yes	N U		Range:	Dir:
SUMMARY OF		or riyarology = mai	arany pr	obioinat	10.		- 100	140		range.	Dii.
Hydrophytic Ve		sent?			□ No			Hydric Soils	Present?		
Wetland Hydrol				✓ Yes						Nithin A Wetla	
Remarks:											
HYDROLOGY											
Wetland Hydro	ology Indica	ators (Check here if	indicato	rs are n	ot nresen	t 🗆)•					
Primary:		itors (Oncok norch	indicate	ns arc ii	ot presen	. –).			Secondary:		
	A1 - Surface	Water		✓	B9 - Wate	er-Stained	Leaves			B6 - Surface So	il Cracks
	A2 - High Wa					atic Fauna				B10 - Drainage	
☑	A3 - Saturation					e Aquatic I				C2 - Dry-Season	
	B1 - Water M B2 - Sedimer					ogen Sulfi	spheres on Living Roots			C8 - Crayfish Bu	urrows Visible on Aerial Imagery
	B3 - Drift Der						duced Iron			D1 - Stunted or	
	B4 - Algal Ma				C6 - Rece	ent Iron Re	duction in Tilled Soils			D2 - Geomorphi	ic Position
	B5 - Iron Dep					Muck Surf			☑	D5 - FAC-Neutra	al Test
		on Visible on Aerial Ima				ge or Well					
	bo - Sparsery	/ Vegetated Concave S	unace	ш	Other (Ex	piaiii iii Re	marks)				
Field Observat	ione:										
		□ Yes ☑ No	Donth:		(in.)						
Surface Water I Water Table Pro		□ Yes ☑ No	Depth: Depth:		(in.)			Wetland Hy	drology Pr	esent? ☑	Yes □ No
Saturation Pres		☑ Yes □ No	Depth:		(in.)						
					. ,		<u> </u>				
	ed Data (stre	am gauge, monitoring	g well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A		
Remarks:											
COLLC											
SOILS		De A. Dennington eil	t leam 0	20/ alar							
Map Unit Name		BeA-Bennington sil									
Map Unit Name Profile Descrip	otion (Describe to t			the absence of	findicators.) (Typ	e: C=Concentral	on, D=Depletion, RM=Reduced Matrix, CS=(ins; Location: PL=Pc	ore Lining, M=Matrix)	Teyture
Map Unit Name Profile Descrip Top	Bottom	he depth needed to document the ind	icator or confirm	the absence of Matrix	f indicators.) (Typ	ie: C=Concentrat	Redo	ox Features	T	1	Texture
Map Unit Name Profile Descrip Top Depth	Bottom Depth	he depth needed to document the ind	cator or confirm	Matrix (Moist)	f indicators.) (Typ		Color (Moist)	ox Features %	Туре	Location	(e.g. clay, sand, loam)
Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 8	he depth needed to document the ind Horizon	Color 10YR	Matrix (Moist) 4/2	% 92	7.5YR	Color (Moist) 6/8	% 8	Type C	Location M	(e.g. clay, sand, loam)
Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 8	he depth needed to document the Ind Horizon	Color 10YR	Matrix (Moist) 4/2	% 92	7.5YR 	Color (Moist) 6/8	% 8	Type C 	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 8	he depth needed to document the ind Horizon	Color 10YR	Matrix (Moist) 4/2	% 92	7.5YR 	Color (Moist) 6/8	% 8	Type C 	Location M 	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 8	he depth needed to document the ind Horizon	Color 10YR	Matrix (Moist) 4/2	% 92	7.5YR 	Color (Moist) 6/8	% 8	Type C 	Location M 	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 8	he depth needed to document the ind Horizon	Color 10YR	Matrix (Moist) 4/2	% 92	7.5YR 	Redo Color (Moist) 6/8	9 8	Type C 	Location M 	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 8	he depth needed to document the ind Horizon	Color 10YR	Matrix (Moist) 4/2	% 92	7.5YR	Redo Color (Moist) 6/8	8	Type	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0	btion (Describe to Depth 8	he depth needed to document the ind Horizon	Color 10YR	Matrix (Moist) 4/2	% 92	7.5YR	Redo Color (Moist) 6/8	% 8	Type C	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0	btion (Describe to Depth 8	he depth needed to document the ind Horizon	Color 10YR	mthe absence of Matrix (Moist) 4/2	% 92	7.5YR	Redo Color (Moist) 6/8	% 8	Type C	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric S	Bottom Depth 8 Soil Field In	he depth needed to document the ind Horizon	Color 10YR	the absence of Matrix (Moist) 4/2	% 92 re not pre	7.5YR	Redo Color (Moist) 6/8	Section Sect	Type	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric S	btion (Describe to Describe to Depth 8 Soil Field In A1- Histosol	Horizon	Color 10YR	h the absence of Matrix (Moist) 4/2 cators al	% 92 S4 - Sanc	7.5YR sent □	Redo Color (Moist) 6/8	Section Sect	Type C for Problem A16 - Coast	Location M	(e.g. clay, sand, loam)
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric S	Bottom Depth 8 Soil Field In	Horizon dicators (check he	Color 10YR	the absence of Matrix (Moist) 4/2	% 92	7.5YR sent □	Redo Color (Moist) 6/8	Section Sect	Type C for Problem S7 - Dark Si S7 - Dark Si	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 8 Soil Field In A1- Histosol A2 - Histic Eg A3 - Black Hi A4 - Hydroge	Horizon	Color 10YR	matrix (Moist) 4/2 cators al	% 92 en ot pre \$4 - Sanc \$6 - Strip	7.5YR sent □ ly Gleyed ly Redox	Redo Color (Moist) 6/8	ox Features % 8 Indicators	Type C	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 8 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier	He depth needed to document the ind Horizon dicators (check he oppedon stic in Sulfide d Layers	Color 10YR	matrix (Moist) 4/2 cators al	% 92	7.5YR	Redo Color (Moist) 6/8	sx Features % 8 Indicators	Type C	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric S	Bottom Depth 8 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratiffec A10 - 2 cm M	He depth needed to document the ind Horizon dicators (check he bipedon stic on Sulfide d Layers luck	Color 10YR	matrix (Moist) 4/2 cators al	% 92	7.5YR	Redo Color (Moist) 6/8	ox Features % 8 Indicators	Type C	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric S	Bottom Depth 8 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiee A11 - Deplett	He depth needed to document the ind Horizon	Color 10YR	nthe absence of Matrix (Moist) 4/2 cators al	% 92	7.5YR	Redo Color (Moist) 6/8	ox Features % 8 Indicators	Type C	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric S	Bottom Depth 8 Soil Field In A1- Histosol A2 - Histic Eg A3 - Black Hi A4 - Hydroge A5 - Stratifier A11 - Deplete A12 - Thick E	Horizon	Color 10YR	matrix (Moist) 4/2 cators al	% 92	7.5YR	Redo Color (Moist) 6/8): Matrix ineral Matrix stage Surface Surface	ox Features % 8 Indicators	Type C	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Notion (Describe to Describe t	Horizon	Color 10YR	matrix (Moist) 4/2 cators al	% 92	7.5YR	Redo Color (Moist) 6/8	ox Features % 8 Indicators	Type C	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric S	Bottom Depth 8	Horizon	Color 10YR	matrix (Moist) 4/2 cators al	% 92	7.5YR	Redo Color (Moist) 6/8	ox Features % 8 Indicators Indicators of hydrophy	Type C	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric S	Bottom Depth 8	He depth needed to document the ind Horizon	Color 10YR	matrix (Moist) 4/2 cators al	% 92	7.5YR	Redo Color (Moist) 6/8	ox Features % 8 Indicators	Type C	Location M	(e.g. clay, sand, loam) clay
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric S	Bottom Depth 8 Soil Field In A1- Histosol A2 - Histic Ep A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm ML Type:	Horizon	Color 10YR re if india	matrix (Moist) 4/2 cators al	% 92	7.5YR	Redo Color (Moist) 6/8	ox Features % 8 Indicators Indicators of hydrophy	Type C	Location M	(e.g. clay, sand, loam) clay



WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site: Vinmar Village Wetland 1 Sample Point: SP01

VEGETATION	(Species identified in all uppercase are non-na	ative spe	cies.)		
	et size: 30 ft radius)				
	Species Name	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:1 (A)
3.				-	
4.				-	Total Number of Dominant Species Across All Strata:1 (B)
5.				-	
6.				-	Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp
	Total Cover =	0			FACW spp
					FAC spp
	atum (Plot size: 15 ft radius)				FACU spp
1.					UPL spp
2.					
3.					Total(B)
4.					
5.					
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☑ Yes □ No Rapid Test for Hydrophytic Vegetation ☐ Test ☐ Te
10.	T-t-l O				☑ Yes □ No Dominance Test is > 50%
	Total Cover =	0			☐ Yes ☐ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo		25	V	EAC\\\	☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	Phalaris arundinacea	35 10	Y	FACW	* Indicators of hydric soil and wetland hydrology must be
2. 3.	Schoenoplectus fluviatilis	10	N N	OBL OBL	present, unless disturbed or problematic.
3. 4.	Scirpus atrovirens	10	N	OBL	Definitions of Variation Strates
<u>4.</u> 5.	Juncus effusus Typha latifolia	5	N N	OBL	Definitions of Vegetation Strata:
6				OBL	Troo - W. J. J. C. (7.0.)
7.					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
8.					Stade Holgin (SSLI), Togalaloo of Holgin
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
10.	Total Cover =	70			1100aj 11100
	Total Cover -	70			
Woody Vina Strate	um (Plot size: 30 ft radius)				
1.	uni (Piot size. 50 it radius)				
2.					
3.					Hydrophytic Vegetation Present ☑ Yes ☐ No
4.					Tryatophysio rogotation ribbonic = 100 = 100
5.					
<u>J.</u>	Total Cover =	0			
Remarks:	25% open ground.				
	2 2				
Additional Rer	narks:				
Additional Net	nanco.				



WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site:	Vinmar Vill						Stantec Project #:	173409307		Date:	05/19/17
Applicant:		estment Limited								County:	Delaware
Investigator #1:					gator #2:					State:	Ohio
Soil Unit:	BeA-Bennington silt loam, 0-2% slopes NWI/WWI Classification: Terrace Local Relief: Linear									Wetland ID:	
Landform:	Terrace									Sample Point:	
Slope (%):	0	Latitude:			ongitude:				WGS 1984	Community ID:	•
		ditions on the site ty				(If no, expla		☑ Yes □	No	Section:	-
		or Hydrology □ sig					Are normal circumstan	•	?	Township:	Genoa
		or Hydrology □ nat	turally pr	oblemat	ic?		Yes	NŪ		Range:	Dir:
SUMMARY OF											
Hydrophytic Ve					□ No			Hydric Soils			□ Yes ☑ No
Wetland Hydrol	ogy Present	?		□ Yes	☑ No			Is This Samp	oling Point \	Within A Wetla	and? ■ Yes ■ No
Remarks:											
HYDROLOGY											
Wetland Hydro	ology Indica	ators (Check here if	indicato	ors are n	ot presen	t ☑):					
Primary:		atoro (orioon noro ii	maioacc	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ot procon	. – ,.			Secondary:		
	A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface So	il Cracks
	A2 - High Wa	ater Table			B13 - Aqu	iatic Fauna	ı			B10 - Drainage	Patterns
	A3 - Saturation				B14 - Tru					C2 - Dry-Season	
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu	
	B2 - Sedimer						spheres on Living Roots duced Iron				Visible on Aerial Imagery
	B3 - Drift Dep B4 - Algal Ma						duction in Tilled Soils			D1 - Stunted or D2 - Geomorphi	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutra	
		on Visible on Aerial Ima	agerv		D9 - Gau				_	20 1710 110411	1 1 0 0 1
		Vegetated Concave S			Other (Ex						
Field Observat	ions:										
Surface Water I	Present?	□ Yes ☑ No	Depth:		(in.)						V = N
Water Table Pro		□ Yes ☑ No	Depth:		(in.)			Wetland Hy	arology Pr	esent?	Yes ☑ No
Saturation Pres		□ Yes ☑ No	Depth:		(in.)						
		am aquaa manitarina			. ,	a inanaati	ana) if available:		N/A		
	eu Data (Sire	am gauge, monitoring	y well, ae	nai prioto	is, previou	sinspecti	oris), ii avaliable.		IN/A		
Remarks:											
0011.0											
SOILS				00/							
Map Unit Name		BeA-Bennington sil									
	OTION (Describe to										
		the depth needed to document the ind	icator or confirm			e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=Co		ins; Location: PL=Po	ore Lining, M=Matrix)	T .
Тор	Bottom			Matrix		e: C=Concentrat	Redo	x Features	1	ı	Texture
Depth	Depth	the depth needed to document the ind	Color	Matrix (Moist)	%	e: C=Concentrat			Type	re Lining, M=Matrix) Location	(e.g. clay, sand, loam)
•				Matrix		e: C=Concentral	Redo	x Features	1	ı	
Depth	Depth	Horizon	Color	Matrix (Moist)	%		Color (Moist)	x Features %	Туре	Location	(e.g. clay, sand, loam)
Depth 0	Depth 8	Horizon 	Color 10YR	Matrix (Moist) 4/3	% 100		Redo Color (Moist)	% Features	Type 	Location 	(e.g. clay, sand, loam)
Depth 0	Depth 8	Horizon 	Color 10YR	Matrix (Moist) 4/3	% 100 		Redo Color (Moist)	% Features % 	Type	Location 	(e.g. clay, sand, loam) clay loam
Depth 0 	Depth 8	Horizon 	Color 10YR 	Matrix (Moist) 4/3 	% 100 		Redo Color (Moist)	%	Type	Location 	(e.g. clay, sand, loam) clay loam
Depth 0 	Depth 8	Horizon 	Color 10YR 	Matrix (Moist) 4/3 	% 100 	 	Redo Color (Moist)	%	Type	 	(e.g. clay, sand, loam) clay loam
Depth 0	Depth 8	Horizon	Color 10YR 	Matrix (Moist) 4/3 	% 100		Redo Color (Moist)	%	Type	Location	(e.g. clay, sand, loam) clay loam
Depth 0	Depth 8	Horizon	Color 10YR 	Matrix (Moist) 4/3 	% 100 		Redo Color (Moist)	%	Type		(e.g. clay, sand, loam) clay loam
Depth 0	Depth 8	Horizon	Color 10YR 	Matrix (Moist) 4/3	% 100	 	Redo Color (Moist)		Type	Location	(e.g. clay, sand, loam) clay loam
Depth 0 NRCS Hydric S	Depth 8	Horizon	Color 10YR 	Matrix (Moist)	% 100 re not pre	 ssent 🗹	Redo Color (Moist)	% Indicators	Type	Location	(e.g. clay, sand, loam) clay loam
Depth 0 NRCS Hydric :	Depth 8	Horizon dicators (check he	Color 10YR 	Matrix (Moist) 4/3 cators ar	% 100 re not pre \$4 - Sanc	 sent ☑ dy Gleyed	Redo Color (Moist)	x Features % Indicators	Type sfor Problem	Location	(e.g. clay, sand, loam) clay loam
Depth 0 NRCS Hydric S	Depth 8	Horizon dicators (check he	Color 10YR 	Matrix (Moist) 4/3 cators al	% 100	sent ☑ y Gleyed y Redox	Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, sand, loam) clay loam
Depth 0 NRCS Hydric 3	Depth 8	Horizon	Color 10YR 	Matrix (Moist) 4/3 cators ar	% 100		Redo Color (Moist)	x Features %	Type	Location	(e.g. clay, sand, loam) clay loam
Depth 0 NRCS Hydric :	Depth 8 Soil Field Int A1- Histosol A2 - Histic E _I A3 - Black Hi	Horizon dicators (check he	Color 10YR 	Matrix (Moist) 4/3 cators ar	% 100 en ot pre \$4 - Sanc \$6 - Strip		Redo Color (Moist)	x Features %	Type	Location	(e.g. clay, sand, loam) clay loam
Depth 0 NRCS Hydric S	Depth 8 Soil Field In A1- Histosol A2 - Histic EI A3 - Black Hi A4 - Hydroge	Horizon dicators (check he	Color 10YR 	Matrix (Moist) 4/3 cators al	% 100		Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, sand, loam) clay loam
Depth 0 NRCS Hydric:	Depth 8 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifiee A10 - 2 cm M A11 - Deplet	Horizon	Color 10YR re if indi	Matrix (Moist) 4/3 cators an	% 100	sent ☑ y Gleyed I ly Redox ped Matrix y Muck M y Gleyed eted Matrix xx Dark Su	Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, sand, loam) clay loam
Depth 0 NRCS Hydric:	Depth 8 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifie A11 - Deplet A12 - Thick L	Horizon	Color 10YR re if indi	Matrix (Moist) 4/3 cators ar	% 100	sent ☑ ty Gleyed ly Redox ped Matrix ny Muck M ny Gleyed Matrix ny Muck M ty Gleyed teted Matrix ty Dark Su eted Dark	Redo Color (Moist)): Matrix ineral Matrix craface Surface Surface	x Features % Indicators	Type	Location	(e.g. clay, sand, loam) clay loam
Depth 0 NRCS Hydric S	Depth 8 Soil Field In A1- Histosol A2 - Histic El A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm N A11 - Deplet A12 - Thick E S1 - Sandy N	Horizon	Color 10YR re if indi	Matrix (Moist) 4/3 cators an	% 100	sent ☑ ty Gleyed ly Redox ped Matrix ny Muck M ny Gleyed Matrix ny Muck M ty Gleyed teted Matrix ty Dark Su eted Dark	Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, sand, loam) clay loam
Depth 0 NRCS Hydric :	Depth 8 Soil Field In A1- Histosol A2 - Histic El A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm N A11 - Deplet A12 - Thick E S1 - Sandy N	Horizon	Color 10YR re if indi	Matrix (Moist) 4/3 cators ar	% 100	sent ☑ ty Gleyed ly Redox ped Matrix ny Muck M ny Gleyed Matrix ny Muck M ty Gleyed teted Matrix ty Dark Su	Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, sand, loam) clay loam
Depth O NRCS Hydric :	Depth 8 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy N S3 - 5 cm Mt	Horizon	Color 10YR re if indi	Matrix (Moist) 4/3 cators ar	% 100	sent ☑ ty Gleyed ly Redox ped Matrix ny Muck M ny Gleyed Matrix ny Muck M ty Gleyed teted Matrix ty Dark Su	Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, sand, loam) clay loam
Depth O NRCS Hydric :	Depth 8 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifiee A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M S3 - 5 cm Mt Type:	Horizon	Color 10YR re if indi	Matrix (Moist) 4/3 cators an	% 100	seent ☑ seent ☑ y Gleyed I y Redox ped Matrix y Muck M y Gleyed eted Matrix xx Dark Su eted Dark xx Depress	Redo Color (Moist)	x Features % Indicators Indicators of hydrophyt Hydric Soil	Type	Location	(e.g. clay, sand, loam) clay loam
Depth O NRCS Hydric :	Depth 8 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifiee A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M S3 - 5 cm Mt Type:	Horizon	Color 10YR re if indi	Matrix (Moist) 4/3 cators an	% 100	seent ☑ seent ☑ y Gleyed I y Redox ped Matrix y Muck M y Gleyed eted Matrix xx Dark Su eted Dark xx Depress	Redo Color (Moist)	x Features % Indicators Indicators of hydrophyt Hydric Soil	Type	Location	(e.g. clay, sand, loam) clay loam
Depth O NRCS Hydric :	Depth 8 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifiee A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M S3 - 5 cm Mt Type:	Horizon	Color 10YR re if indi	Matrix (Moist) 4/3 cators an	% 100	seent ☑ seent ☑ y Gleyed I y Redox ped Matrix y Muck M y Gleyed eted Matrix xx Dark Su eted Dark xx Depress	Redo Color (Moist)	x Features % Indicators Indicators of hydrophyt Hydric Soil	Type	Location	(e.g. clay, sand, loam) clay loam

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No



12 13 14

15

1. 2. 3.

4. 5.

Remarks:

Woody Vine Stratum (Plot size: 30 ft radius)

15% open ground.

Total Cover =

Total Cover =

WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site: Vinmar Village Wetland ID: Wetland 1 Sample Point: SP02 **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) **Dominance Test Worksheet** Species Name % Cover Dominant Ind.Status 2. Number of Dominant Species that are OBL, FACW, or FAC: 1 (A) 3. 4. Total Number of Dominant Species Across All Strata: 1 (B) 5 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: 10 OBL spp. FACW spp. Total Cover = 0 FAC spp. Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. 1. UPL spp. 3. Total (B) 4. 5. 6 7. Hydrophytic Vegetation Indicators: 8. 9. ✓ No Rapid Test for Hydrophytic Vegetation ☐ Yes □ No 10 Yes Dominance Test is > 50% Total Cover = ☐ Yes □ No Prevalence Index is ≤ 3.0 * □ Yes □ No Morphological Adaptations (Explain) * Herb Stratum (Plot size: 5 ft radius) □ Yes □ No Problem Hydrophytic Vegetation (Explain) * 80 FACW Phalaris arundinacea * Indicators of hydric soil and wetland hydrology must be Brassica rapa 5 Ν UPL present, unless disturbed or problematic. 3. **Definitions of Vegetation Strata:** 5. 6 Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. 7 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9 ft. tall. 10 11

Additional R	emarks:			



WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site:	Vinmar Vill	age					Stantec Project #:	173409307		Date:	05/19/17
Applicant:	Vinmar Inv	estment Limited								County:	Delaware
Investigator #1:	Jennifer Ni	etz		Investi	gator #2:	Angela S	Sjollema			State:	Ohio
Soil Unit:	BeA-Benni	ngton silt loam, 0-29	% slopes	;		١	IWI/WWI Classification:	:		Wetland ID:	Wetland 2
Landform:	Depression Local Relief: Concave									Sample Point:	SP03
Slope (%):										Community ID:	
		ditions on the site ty						☑ Yes □	No	Section:	
		or Hydrology □ sig				(,	Are normal circumsta			Township:	Genoa
		or Hydrology □ nat					✓ Yes	N⊎	•	Range:	Dir:
SUMMARY OF		or riyurology = riai	urally pr	obiciliat	10:		165	IA⊖		rtange.	Bii
		m+O		= Vaa	- No			Lludria Caila	Draganta		□ Vee □ Ne
Hydrophytic Ve	_							Hydric Soils			☑ Yes □ No
Wetland Hydrol	logy Present	?		☑ Yes	□ No			Is This Samp	oling Point V	Nithin A Wetla	and? □ Yes ■ No
Remarks:											
HYDROLOGY											
Wotland Hydr	ology Indica	ators (Check here if	indicato	re are n	ot precen	+ II \•					
Primary:		ILOIS (CHECK HEIE II	iiiuicatu	is ale iii	ot presen	ιι □).			Secondary:		
	A1 - Surface	Water			BQ - Wate	er-Stained	Leaves			B6 - Surface So	il Cracke
	A2 - High Wa					uatic Fauna				B10 - Drainage	
	A3 - Saturation					e Aquatic F				C2 - Dry-Season	
_	B1 - Water M					ogen Sulfi				C8 - Crayfish Bu	
_	B2 - Sedimer						spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift Dep						duced Iron			D1 - Stunted or	
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi	
	B5 - Iron Dep				C7 - Thin	Muck Surf	ace			D5 - FAC-Neutra	
	B7 - Inundati	on Visible on Aerial Ima	agery		D9 - Gau	ge or Well	Data				
	B8 - Sparsely	Vegetated Concave S	urface		Other (Ex	plain in Re	marks)				
Field Observat	tions:										
Surface Water	Present?	□ Yes ☑ No	Depth:		(in.)						· - · ·
Water Table Pr		□ Yes ☑ No	Depth:		(in.)			Wetland Hy	drology Pr	esent?	Yes □ No
Saturation Pres		☑ Yes □ No	Depth:	0	(in.)						
Describe Record	ed Data (stre	am gauge, monitoring	y well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A		
Remarks:											
SOILS											
Map Unit Name	2:	BeA-Bennington sil	t Ioam. C)-2% slo	pes						
						e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS=	Covered/Coated Sand Gra	ins: Location: PL=Pc	ore Lining M=Matrix)	
Тор	Bottom			Matrix				ox Features		g,,	Texture
Depth		Horizon	Color	(Moist)	%		Color (Moist)	%	Typo	Location	(e.g. clay, sand, loam)
	Depth					5) (5)			Type	Location	
0	18		10YR	3/2	80	5YR	4/6	20	C	M	clay loam
18	21		10YR	3/2	80	5YR	4/6	15	С	M	clay loam
						7.5YR	5/8	5	С	M	
											
					1						
NRCS Hydric	Soil Field In	dicators (check he	re if indi	cators a	e not pre	esent 🗆):	Indicators	for Problem	natic Soils 1	
	A1- Histosol	•				dy Gleyed I			A16 - Coast	Prairie Redox	
	A2 - Histic E	oipedon			S5 - Sand	dy Redox			S7 - Dark St	urface	
	, 10 D.GO.T.					ped Matrix				anganese Masse	
	A4 - Hydroge					ny Muck M				Shallow Dark Su	urface
		d Layers				ny Gleyed			Other (Expla	in in Remarks)	
	A5 - Stratified				F3 - Depl	eted Matrix	(
	A10 - 2 cm M			_							
	A10 - 2 cm M A11 - Deplete	ed Below Dark Surface		✓		ox Dark Su					
	A10 - 2 cm M A11 - Deplete A12 - Thick D	ed Below Dark Surface Dark Surface			F7 - Depl	eted Dark	Surface				
_ _ _	A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M	ed Below Dark Surface Dark Surface Muck Mineral			F7 - Depl		Surface				
	A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M	ed Below Dark Surface Dark Surface			F7 - Depl	eted Dark	Surface	¹ Indicators of hydrophy	tic vegetation and w	etland hydrology must be	present, unless disturbed or problematic.
Restrictive Layer	A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M	ed Below Dark Surface Dark Surface Muck Mineral ucky Peat or Peat			F7 - Depl	eted Dark	Surface	¹ Indicators of hydrophy Hydric Soil			present, unless disturbed or problematic. Yes No
Restrictive Layer (If Observed)	A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm Mu	ed Below Dark Surface Dark Surface Muck Mineral ucky Peat or Peat			F7 - Depl	eted Dark	Surface				
Restrictive Layer	A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm Mu	ed Below Dark Surface Dark Surface Muck Mineral ucky Peat or Peat			F7 - Depl	eted Dark	Surface				
Restrictive Layer (If Observed)	A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm Mu	ed Below Dark Surface Dark Surface Muck Mineral ucky Peat or Peat			F7 - Depl	eted Dark	Surface				



WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site: Vinmar Village Wetland 1D: Wetland 2 Sample Point: SP03

VEGETATION	(Species identified in all uppercase are non-n	ative spe	cies.)		
	ot size: 30 ft radius)		,		
	Species Name	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.	Quercus palustris	30	Υ	FACW	
2.	Acer saccharinum	60	Υ	FACW	Number of Dominant Species that are OBL, FACW, or FAC: (A)
3.	Carya laciniosa	10	N	FACW	
4.					Total Number of Dominant Species Across All Strata: (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp
	Total Cover =	100			FACW spp
					FAC spp
	atum (Plot size: 15 ft radius)				FACU spp
1.	Quercus palustris	25	Y	FACW	UPL spp
2.	Ulmus americana	10	Y	FACW	
3.	Gleditsia triacanthos	2	N	FACU	Total(B)
4.					
5.			-		
6.					
7.					Hadranka dia Manadadian India dan
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.	Total Cayer -	37			✓ Yes □ No Dominance Test is > 50%
	Total Cover =	31			☐ Yes ☐ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
	ot size: 5 ft radius) Cinna arundinacea	30	Y	FACW	☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1. 2.	Toxicodendron radicans	10	Y	FAC	* Indicators of hydric soil and wetland hydrology must be
3.	Carex bebbii	5	N	OBL	present, unless disturbed or problematic.
4.	Carex grayi	5	N	FACW	Definitions of Vegetation Strata:
5.	Carex grayi			TACW	Definitions of Vegetation Strata.
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.					breast height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =				, , , , , , , , , , , , , , , , , , ,
	10tai 00vei –	50			
Woody Vine Strat	um (Plot size: 30 ft radius)				
1.	Toxicodendron radicans	5	Υ	FAC	
2.		<u>~</u>	<u> </u>		
3.					Hydrophytic Vegetation Present ☑ Yes ☐ No
4.					
5.					
<u>.</u>	Total Cover =				
Remarks:	50% open ground.				
Additional Re	marks:				



WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site:	Vinmar Villa						Stantec Project #:	173409307		Date:	05/19/17					
Applicant:										County: State:	Delaware					
Investigator #1:			gator #2:		gela Sjollema				Ohio							
Soil Unit:		ngton silt loam, 0-2°	% slopes			NWI/WWI Classification: N/A			Wetland ID:							
Landform:	Depression				al Relief:					Sample Point:						
Slope (%):	0	Latitude:			ongitude:				WGS 1984	Community ID:	•					
		litions on the site ty				(If no, expla		☑ Yes □	No	Section:	-					
		or Hydrology □ sig					Are normal circumstar	•	?	Township:	Genoa					
		or Hydrology □ na	turally pr	oblemat	ic?		Yes	NŪ		Range:	Dir:					
SUMMARY OF																
Hydrophytic Ve	_				☑ No			Hydric Soils								
Wetland Hydrol	ogy Present	?		□ Yes	☑ No			Is This Samp	oling Point \	Within A Wetla	and? ■ Yes ⊠ No					
Remarks:																
HYDROLOGY																
Wetland Hydro	ology Indica	ators (Check here it	indicato	rs are n	ot presen	t ☑):										
Primary:		ALOIO (ONOOR NOIO II	maioato	10 010 11	ot procon	. – ,.			Secondary:							
	A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface So	il Cracks					
	A2 - High Wa					atic Fauna				B10 - Drainage						
	A3 - Saturation					e Aquatic I				C2 - Dry-Seaso						
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu						
	B2 - Sedimer B3 - Drift Dep						spheres on Living Roots duced Iron			D1 - Stunted or	Visible on Aerial Imagery					
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi						
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutr						
		on Visible on Aerial Ima	agery		D9 - Gau											
	B8 - Sparsely	Vegetated Concave S	Surface		Other (Ex	plain in Re	marks)									
Field Observat	ions:															
Surface Water I	Present?	□ Yes ☑ No	Depth:		(in.)			Wetland Hy	drolom, Dr	t2	Yes ☑ No					
Water Table Pro	esent?	□ Yes ☑ No	Depth:		(in.)			welland ny	arology Pr	esent? -	TES M INO					
Saturation Pres	ent?	□ Yes ☑ No	Depth:		(in.)											
Describe Records	ed Data (stre	am gauge monitoring	r well ae	rial nhoto	s previou	e inenacti	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A									
	0															
Remarke:			, ,,,,	iiai piioto	-, p	3 mapecu	ons), ii avaliable.		IN/A							
Remarks:			<u>, , , , , , , , , , , , , , , , , , , </u>	a. prioto		з пізресп	ons), ii avaliable.		IV/A							
			5 - ,	inai pinoto	, p	з тэреси	ons), ii avaliable.		IV/A							
SOILS	,	Re∆-Rennington si		·	•	з тэреси	опѕ), п ачапавіе.		N/A							
SOILS Map Unit Name		BeA-Bennington sil	t loam, 0)-2% slo	pes	·	,	Voyered/Coster/ Sand Gro		ore Lining M=Metriv)						
SOILS Map Unit Name Profile Descrip	tion (Describe to t		t loam, 0	0-2% SIO	pes f indicators.) (Typ	·	on, D=Depletion, RM=Reduced Matrix, CS=C			ore Lining, M=Matrix)	Teyture					
SOILS Map Unit Name Profile Descrip Top	Bottom (Describe to t	he depth needed to document the inc	t Ioam, C	0-2% slo the absence of Matrix	pes findicators.) (Typ	·	ion, D=Depletion, RM=Reduced Matrix, CS=C	x Features	nins; Location: PL=Po	ı	Texture					
SOILS Map Unit Name Profile Descrip Top Depth	Bottom (Describe to to Bottom Depth	he depth needed to document the inc	t loam, C	0-2% slo the absence of Matrix (Moist)	pes findicators.) (Typ	e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features %	nins; Location: PL=Po	Location	(e.g. clay, sand, loam)					
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth	he depth needed to document the inc Horizon	t loam, Clicator or confirm Color 10YR	0-2% slo the absence of Matrix (Moist) 3/2	pes findicators.) (Type % 9% 93	e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4	% Features 7	Type	Location M	(e.g. clay, sand, loam)					
SOILS Map Unit Name Profile Descrip Top Depth 0 3	Bottom (Describe to to Bottom Depth 3 18	he depth needed to document the inc Horizon	t loam, Clicator or confirm Color 10YR 10YR	0-2% slo the absence of Matrix (Moist) 3/2 4/1	pes indicators.) (Type	e: C=Concentrat 7.5YR 7.5YR	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4	% Features % 7 10	Type C C	Location M M	(e.g. clay, sand, loam) clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3	Bottom (Describe to	he depth needed to document the inc Horizon	t loam, Clicator or confirm Color 10YR 10YR	0-2% slo the absence of Matrix (Moist) 3/2 4/1	pes findicators.) (Typ % 93 88	e: C=Concentrat 7.5YR 7.5YR 5YR	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6	% Features % 7 10 2	Type C C C	Location M M PL	(e.g. clay, sand, loam) clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18	Bottom Depth 3 18 21	he depth needed to document the inc Horizon	t loam, Clicator or confirm Color 10YR 10YR 10YR	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1	pes (indicators.) (Typ % 93 88 77	7.5YR 7.5YR 5YR 2.5YR	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1	7 10 2 10	Type C C C D	Location M M PL M	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3	Bottom (Describe to	he depth needed to document the inc Horizon	t loam, Clicator or confirm Color 10YR 10YR	0-2% slo the absence of Matrix (Moist) 3/2 4/1	pes findicators.) (Typ % 93 88	7.5YR 7.5YR 5YR 2.5YR 5YR	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6	% Features % 7 10 2	Type C C C C C C	Location M M PL M M	(e.g. clay, sand, loam) clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18	Bottom Depth 3 18 21	he depth needed to document the inc Horizon	t loam, Clicator or confirm Color 10YR 10YR 10YR	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1	pes (indicators.) (Typ % 93 88 77	7.5YR 7.5YR 5YR 2.5YR	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1	7 10 2 10	Type C C C D	Location M M PL M	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18	Bottom Depth 3 18 21	he depth needed to document the inc Horizon	t loam, Clicator or confirm Color 10YR 10YR 10YR	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1	pes (indicators.) (Type (i	7.5YR 7.5YR 5YR 2.5YR 5YR	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6	x Features % 7 10 2 10 5	Type C C C C C C	Location M M PL M M	(e.g. clay, sand, loam) clay loam clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18	Bottom Depth 3 18 21	he depth needed to document the inc Horizon	t loam, Clicator or confirm Color 10YR 10YR 10YR	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1	Pes Indicators) (Typ % 93 88 77	7.5YR 7.5YR 5YR 5YR 2.5YR 5YR 7.5YR	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8	x Features	Type C C C C C C C	Location M M PL M M M	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18	btion (Describe to Describe to Depth 3 18 21	he depth needed to document the inc Horizon	t loam, Clicator or confirm Color 10YR 10YR 10YR	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1	Pes (Indicators.) (Type 9 9 9 9 9 8 8 777	7.5YR 7.5YR 7.5YR 7.5YR 5YR 2.5YR 5YR 7.5YR	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8	x Features	Type C C C C C C	Location M M PL M M M	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18	btion (Describe to Describe to Depth 3 18 21	he depth needed to document the inc Horizon	t loam, Clicator or confirm Color 10YR 10YR 10YR	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1	pes % 93 88 77 re not pres	7.5YR 7.5YR 7.5YR 7.5YR 5YR 2.5YR 5YR 7.5YR	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8);	x Features	Type C C C C C C s for Problem	Location M M PL M M M	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18 NRCS Hydric	btion (Describe to the Depth September 18 Se	Horizon dicators (check he	t loam, Clicator or confirm Color 10YR 10YR 10YR	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1 cators al	pes % 93 88 77	7.5YR 7.5YR 5YR 5YR 2.5YR 7.5YR 1.5YR 1.5Y	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 4/6 3/1 4/6 5/8): Matrix	No. No.	Type C C C C D C C C C a for Problem A16 - Coast S7 - Dark St	Location M M PL M M M Prairie Redox	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18 NRCS Hydric S	btion (Describe to 1) Bottom Depth 3 18 21 Soil Field In A1- Histosol A2 - Histic Er A3 - Black Hi	Horizon	t loam, Clicator or confirm Color 10YR 10YR 10YR	Matrix (Moist) 3/2 4/1 6/1 cators al	pes % % 93 88 77 55 Sanco S6 - Strip	7.5YR 7.5YR 5YR 5YR 5YR 7.5YR 5YR 7.5YR 9 Gleyed ly Redox	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8): Watrix	x Features	Type C C C C D C C C C S for Problen A16 - Coast St F12 - Iron-M	Location M M PL M M M M PL M Paririe Redox	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18 NRCS Hydric S	Bottom Depth 3 18 21 Soil Field In A1- Histosol A2 - Histic Eg. A3 - Black Hi A4 - Hydroge	Horizon	t loam, Clicator or confirm Color 10YR 10YR 10YR	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1 cators ar	93 88 77 re not pre S4 - Sanc S5 - Sart F1 - Loan	e: C=Concentral 7.5YR 7.5YR 7.5YR 2.5YR 5YR 7.5YR 1.5YR 1.5	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8); Matrix	No. Section No.	Type C C C C D C C C C C Af6 r Problen A16 - Coast S7 - Dark S7 F12 - Iron-M TF12 - Very	Location M M PL M M M M Prairie Redox urface anganese Masse Shallow Dark St	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18 NRCS Hydric:	Bottom Depth 3 18 21 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier	He depth needed to document the inc Horizon dicators (check he oppedon stic in Sulfide di Layers	t loam, Clicator or confirm Color 10YR 10YR 10YR	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1 cators al	Pes % 93 88 77 56 - Sanc S6 - Strip F1 - Loan F2 - Loan F2 - Loan F2 - Loan	7.5YR 7.5YR 5YR 2.5YR 7.5YR 7.5YR 1.5YR 2.5YR 7.5YR 1.5YR 1.	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8): Matrix ineral Matrix	x Features	Type C C C C D C C C C C Af6 r Problen A16 - Coast S7 - Dark S7 F12 - Iron-M TF12 - Very	Location M M PL M M M M PL M Paririe Redox	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18 NRCS Hydric:	btion (Describe to the Depth September 18 Se	He depth needed to document the inc Horizon dicators (check he bipedon stic on Sulfide d Layers luck	t loam, C color 10YR 10YR 10YR re if indic	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1 cators at	pes % 93 88 77 54 - Sanc S6 - Strip F1 - Loan F3 - Depl	7.5YR 7.5YR 5YR 5YR 2.5YR 5YR 7.5YR 1.5YR	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8): Matrix ineral Matrix	No. Section No.	Type C C C C D C C C C C Af6 r Problen A16 - Coast S7 - Dark S7 F12 - Iron-M TF12 - Very	Location M M PL M M M M Prairie Redox urface anganese Masse Shallow Dark St	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18 NRCS Hydric S	btion (Describe to: Bottom Depth 3 18 21 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiee A10 - 2 cm M A11 - Deplete	He depth needed to document the inc Horizon	t loam, C color 10YR 10YR 10YR re if indic	D-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1 cators al	Pes 93 93 88 77	7.5YR 7.5YR 7.5YR 5YR 2.5YR 5YR 7.5YR 1.5YR 7.5YR 1.5YR 1.5Y	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8): Watrix ineral Matrix cfface	No. Section No.	Type C C C C D C C C C C Af6 r Problen A16 - Coast S7 - Dark S7 F12 - Iron-M TF12 - Very	Location M M PL M M M M Prairie Redox urface anganese Masse Shallow Dark St	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18 NRCS Hydric:	btion (Describe to the Depth September 18 Se	Horizon	t loam, C color 10YR 10YR 10YR re if indic	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1 cators at	Pes % 93 88 77	e. C=Concentral 7.5YR 7.5YR 5YR 2.5YR 7.5YR 7.5YR 1.5YR 7.5YR 9 Gleyed lay Redox ped Matrix by Muck Matrix by Dark Su beted Dar	con, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8): Matrix ineral Matrix creace Surface Surface	No. Section No.	Type C C C C D C C C C C Af6 r Problen A16 - Coast S7 - Dark S7 F12 - Iron-M TF12 - Very	Location M M PL M M M M Prairie Redox urface anganese Masse Shallow Dark St	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18 NRCS Hydric :	Bottom Depth 3 18 21 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	Horizon	t loam, C color 10YR 10YR 10YR re if indic	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1 cators ar	Pes % 93 88 77	7.5YR 7.5YR 7.5YR 5YR 2.5YR 5YR 7.5YR 1.5YR 7.5YR 1.5YR 1.5Y	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8): Matrix Inneral Matrix Inface Surface Surface ions	Name	Type C C C D C C C s for Problen A16 - Coast S7 - Dark S1 F12 - Iron-M TF12 - Very Other (Explain	Location M M PL M M M natic Soils Prairie Redox urface langanese Masse Shallow Dark St sin in Remarks)	(e.g. clay, sand, loam) clay loam clay loam clay loam					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18 NRCS Hydric S	Bottom Depth 3 18 18 21 Soil Field In A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm M	Horizon	t loam, C color 10YR 10YR 10YR re if indic	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1 cators ar	Pes % 93 88 77 75 56 5trip F1 Loan F2 Loan F2 Loan F3 Depl F6 Redo F7 Depl F8 Redo	e. C=Concentral 7.5YR 7.5YR 5YR 2.5YR 7.5YR 7.5YR 1.5YR 7.5YR 9 Gleyed lay Redox ped Matrix by Muck Matrix by Dark Su beted Dar	con, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8): Matrix Inneral Matrix Conface Surface Surface ions	x Features % 7 10 2 10 5 8 Indicators	Type C C C C C C C C C C C C C C C C C C C	Location M M PL M M M M natic Soils Prairie Redox urface langanese Massi Shallow Dark St sin in Remarks)	(e.g. clay, sand, loam) clay loam clay loam clay loam es urface					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18 NRCS Hydric:	Bottom Depth 3 18 21 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	Horizon	t loam, C color 10YR 10YR 10YR re if indic	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1 cators ar	Pes % 93 88 77	e. C=Concentral 7.5YR 7.5YR 5YR 2.5YR 7.5YR 7.5YR 1.5YR 7.5YR 9 Gleyed lay Redox ped Matrix by Muck Matrix by Dark Su beted Dar	con, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8): Matrix Inneral Matrix Conface Surface Surface ions	Name	Type C C C C C C C C C C C C C C C C C C C	Location M M PL M M M M natic Soils Prairie Redox urface langanese Massi Shallow Dark St sin in Remarks)	(e.g. clay, sand, loam) clay loam clay loam clay loam es					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18 NRCS Hydric S	Bottom Depth 3 18 18 21 Soil Field In A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm M	Horizon	t loam, C color 10YR 10YR 10YR re if indic	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1 cators ar	Pes % 93 88 77 75 56 5trip F1 Loan F2 Loan F2 Loan F3 Depl F6 Redo F7 Depl F8 Redo	e. C=Concentral 7.5YR 7.5YR 5YR 2.5YR 7.5YR 7.5YR 1.5YR 7.5YR 9 Gleyed lay Redox ped Matrix by Muck Matrix by Dark Su beted Dar	con, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8): Matrix Inneral Matrix Conface Surface Surface ions	x Features % 7 10 2 10 5 8 Indicators	Type C C C C C C C C C C C C C C C C C C C	Location M M PL M M M M natic Soils Prairie Redox urface langanese Massi Shallow Dark St sin in Remarks)	(e.g. clay, sand, loam) clay loam clay loam clay loam es urface					
SOILS Map Unit Name Profile Descrip Top Depth 0 3 18 NRCS Hydric S	Bottom Depth 3 18 18 21 Soil Field In A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm M	Horizon	t loam, C color 10YR 10YR 10YR re if indic	0-2% slo the absence of Matrix (Moist) 3/2 4/1 6/1 cators ar	Pes % 93 88 77 75 56 5trip F1 Loan F2 Loan F2 Loan F3 Depl F6 Redo F7 Depl F8 Redo	e. C=Concentral 7.5YR 7.5YR 5YR 2.5YR 7.5YR 7.5YR 1.5YR 7.5YR 9 Gleyed lated Matrix by Muck Matrix Su Dark Su eted Su eted Dark Su eted Su eted Su eted Su eted Su eted Su et	con, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 3/4 3/4 4/6 3/1 4/6 5/8): Matrix Inneral Matrix Conface Surface Surface ions	x Features % 7 10 2 10 5 8 Indicators	Type C C C C C C C C C C C C C C C C C C C	Location M M PL M M M M natic Soils Prairie Redox urface langanese Massi Shallow Dark St sin in Remarks)	(e.g. clay, sand, loam) clay loam clay loam clay loam es urface					



4. 5.

Remarks:

WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site: Vinmar Village Wetland ID: Wetland 2 Sample Point: SP04 **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) **Dominance Test Worksheet** Species Name % Cover Dominant Ind.Status Quercus palustris 10 FACW 2. N **FACW** Number of Dominant Species that are OBL, FACW, or FAC: 2 (A) Acer saccharinum 3. 4. Total Number of Dominant Species Across All Strata: 5 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: 10 OBL spp. x 1 = FACW spp. Total Cover = 12 x 2 = 14 28 FAC spp. x 3 =240 Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. x 4 = 60 240 1. UPL spp. x = 5 =0 3. Total 154 508 (B) (A) 4. Prevalence Index = B/A = ___ 5. 3.299 6 7. Hydrophytic Vegetation Indicators: 8. ✓ No 9. ☐ Yes Rapid Test for Hydrophytic Vegetation ✓ No 10 ☐ Yes Dominance Test is > 50% Total Cover = ☐ Yes ✓ No Prevalence Index is ≤ 3.0 * □ No □ Yes Morphological Adaptations (Explain) * Herb Stratum (Plot size: 5 ft radius) □ Yes □ No Problem Hydrophytic Vegetation (Explain) * 80 FAC Toxicodendron radicans * Indicators of hydric soil and wetland hydrology must be Parthenocissus quinquefolia 10 Ν **FACU** present, unless disturbed or problematic. FACU 3. N Solidago canadensis 5 Ν **FACU Definitions of Vegetation Strata:** Rubus allegheniensis 5 **FACU** 5. Potentilla indica Ν 6 N **FACW** Impatiens capensis Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. 7 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9 ft. tall. 10 11 12 Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall. 13 14 Woody Vines - All woody vines greater than 3.28 ft. in height. 15 Total Cover = Woody Vine Stratum (Plot size: 30 ft radius) 20 **FACU** Rosa multiflora 1. 2 Rubus allegheniensis 15 **FACU** 3. Hydrophytic Vegetation Present □ Yes ☑ No

Additional Remarks:			

Total Cover =



WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site:	Vinmar Villa						Stantec Project #:	173409307		Date:	05/19/17
Applicant:	Vinmar Inv	estment Limited								County:	Delaware
Investigator #1:					igator #2:					State:	Ohio
Soil Unit:	PwA-Pewa	mo silty clay loam, (0-1% slo	pes		N	WI/WWI Classification	: PEM1C		Wetland ID:	Wetland 3
Landform:	Depression	1		Loc	al Relief:	Concave	•			Sample Point:	SP05
Slope (%):	0	Latitude:	40.1908	L	ongitude:	-82.9013	397	Datum:	WGS 1984	Community ID:	PFO
Are climatic/hyd	drologic cond	litions on the site ty						☑ Yes □	No	Section:	
		or Hydrology □ sig					Are normal circumsta	nces present?	>	Township:	Genoa
		or Hydrology □ nat					✓ Yes	N 0		Range:	Dir:
SUMMARY OF		o	tarany pr	o o i o i i i a i			100	110		rtango.	5
Hydrophytic Ve		cent?		✓ Yes	. □ No			Hydric Soils	Drecent?		
Wetland Hydrol	_			☑ Yes						Nithin A Wetla	
Remarks:	logy Fresent	į.		<u> 168</u>	<u> </u>			is this Samp	Jing Font	Willin A Wella	and? - res - NO
Remarks.											
HYDROLOGY											
Wetland Hydro	ology Indica	ators (Check here if	indicato	rs are n	ot presen	ıt □):					
Primary:			a.oato		от р. осо	,-			Secondary:		
	A1 - Surface	Water		✓	B9 - Wate	er-Stained	Leaves			B6 - Surface So	il Cracks
✓	A2 - High Wa	iter Table			B13 - Aqu	uatic Fauna				B10 - Drainage	Patterns
✓	A3 - Saturation	on			B14 - Tru	e Aquatic F	Plants			C2 - Dry-Season	n Water Table
	B1 - Water M					ogen Sulfi				C8 - Crayfish Bu	
	B2 - Sedimer						spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift Dep						duced Iron			D1 - Stunted or	
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi	
	B5 - Iron Dep				C7 - Thin				⊻	D5 - FAC-Neutra	al lest
		on Visible on Aerial Ima			D9 - Gaug Other (Ex						
	Do - Sparsery	Vegetated Concave S	buriace	ш	Other (Ex	piaiii iii Ke	marks)				
F: 1101 /											
Field Observat											
Surface Water	Present?	☑ Yes □ No	Depth:	1	(in.)			Wetland Hyd	drology Pr	esent?	Yes □ No
Water Table Pr	esent?	☑ Yes □ No	Depth:	4	(in.)			vvotidila riy	arology i i	C3CIII. =	163 = 145
Saturation Pres	sent?	☑ Yes □ No	Depth:	0	(in.)						
Describe Record	ed Data (stre	am gauge, monitoring	n woll an	rial phata	o proviou	a inanasti					
	eu Data (Sile								NI/A		
		gg-,	y well, ac	nai prioto	s, previou	sinspecti	ons), if available:		N/A		
Remarks:			y well, ac	nai prioto	os, previou	s inspecti	ons), if available:		N/A		
			g well, ael	пат рпос	os, previou	s inspecti	ons), if available:		N/A		
SOILS				·	•	s inspecti	ons), if available:		N/A		
SOILS Map Unit Name		PwA-Pewamo silty	clay loar	n, 0-1%	slopes	·	,				
SOILS Map Unit Name		PwA-Pewamo silty	clay loar	n, 0-1%	slopes	·	on. D=Depletion, RM=Reduced Matrix, CS=	·Covered/Coated Sand Grai		ore Lining, M=Matrix)	
SOILS Map Unit Name		PwA-Pewamo silty	clay loar	n, 0-1%	slopes	·	on, D=Depletion, RM=Reduced Matrix, CS=	Covered/Coated Sand Grail		ore Lining, M=Matrix)	Texture
SOILS Map Unit Name Profile Descrip	otion (Describe to t	PwA-Pewamo silty	clay loar	n, 0-1%	slopes	·	on, D=Depletion, RM=Reduced Matrix, CS=			ore Lining, M=Matrix) Location	Texture (e.g. clay, sand, loam)
SOILS Map Unit Name Profile Descrip Top Depth	Bottom Depth	PwA-Pewamo silty the depth needed to document the ind	clay loar	m, 0-1% the absence of Matrix (Moist)	slopes findicators.) (Typ	be: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist)	ox Features %	ins; Location: PL=Pc	Location	(e.g. clay, sand, loam)
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth	PwA-Pewamo silty the depth needed to document the ind Horizon	clay loar	m, 0-1% the absence o Matrix (Moist) 3/1	slopes findicators.) (Typ	be: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6	ox Features % 5	ins; Location: PL=Pc	Location PL	(e.g. clay, sand, loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 3	Bottom (Describe to to Bottom Depth 3	PwA-Pewamo silty the depth needed to document the ind Horizon	clay loar	m, 0-1% the absence of Matrix (Moist) 3/1 3/1	slopes findicators.) (Typ % 95 92	e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8	ox Features % 5 8	Type C C	Location PL M	(e.g. clay, sand, loam) clay loam clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8	Bottom Depth 3 8 21	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar	m, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1	slopes f indicators.) (Typ % 95 92 97	2.5YR 2.5YR 7.5YR	con. D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8	ox Features % 5 8 3	Type C C C	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8	Bottom Depth 3 8 21	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar licator or confirm Color 10YR 10YR 10YR	n, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1	Slopes findicators.) (Type % 95 92 97	2.5YR 2.5YR 7.5YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8	5 8 3 	Type C C C	Location PL M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8	Bottom Depth 3 8 21	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar	m, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1	slopes f indicators.) (Typ % 95 92 97	2.5YR 2.5YR 7.5YR	con. D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8	ox Features % 5 8 3	Type C C C	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8	Bottom Depth 3 8 21	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar licator or confirm Color 10YR 10YR 10YR	n, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1	Slopes findicators.) (Type % 95 92 97	2.5YR 2.5YR 7.5YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8	5 8 3 	Type C C C	Location PL M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8	Bottom Depth 3 8 21	PwA-Pewamo silty the depth needed to document the ind Horizon	clay loar Color 10YR 10YR 10YR	n, 0-1% the absence o Matrix (Moist) 3/1 3/1 2/1	Slopes findicators.) (Type % 95 92 97	2.5YR 2.5YR 7.5YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8	S S S S S S S S S S	Type C C C	Location PL M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8	Depth Depth 3 8 21	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar licator or confirm Color 10YR 10YR 10YR	n, 0-1% the absence o Matrix (Moist) 3/1 3/1 2/1	Slopes findicators.) (Type % 95 92 97	2.5YR 2.5YR 7.5YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8	ox Features	Type C C C	Location PL M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8	botion (Describe to: Bottom Depth 3 8 21	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar icator or confirm Color 10YR 10YR 10YR	n, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1	Slopes rindicators.) (Types % 95 92 97	2.5YR 2.5YR 7.5YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8	% 5 8 3	Type C C C	Location PL M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8	Bottom Depth 3 8 21 Soil Field In	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar icator or confirm Color 10YR 10YR 10YR	n, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1	slopes indicators) (Type 95 95 92 97 re not pre	2.5YR 2.5YR 7.5YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8	ox Features	Type C C C 6 for Problem	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8	Bottom Depth 3 8 21 Soil Field In	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar icator or confirm Color 10YR 10YR 10YR	m, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1 cators a	Slopes findicators.) (Type % 95 92 97 re not pre S4 - Sanc	2.5YR 2.5YR 7.5YR sent □	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8	Section Sect	Type C C C 5 for Problem	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8 NRCS Hydric	Bottom Depth 3 8 21 Soil Field In A1- Histosol A2 - Histic Ep	PwA-Pewamo silty he depth needed to document the ind Horizon dicators (check he	clay loar icator or confirm Color 10YR 10YR 10YR	n, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1	Slopes (Type % % % % % % % % %	2.5YR 2.5YR 7.5YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8	S S S S S S S S S S	Type C C C	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8 NRCS Hydric	Bottom Depth 3 8 21 Soil Field In	PwA-Pewamo silty he depth needed to document the ind Horizon dicators (check he objeedon stic	clay loar icator or confirm Color 10YR 10YR 10YR	n, 0-1% the absence of Matrix (Moist) 3/1 2/1 cators a	Slopes	2.5YR 2.5YR 7.5YR sent □	nn, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8	ox Features	Type C C C s for Problem A16 - Coast S F7 - Dark St F12 - Iron-M	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8 NRCS Hydric	Detion (Describe to: Bottom Depth 3 8 21 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A3 - Black Hi	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar icator or confirm Color 10YR 10YR 10YR	n, 0-1% the absence o Matrix (Moist) 3/1 3/1 2/1 cators a	% 95 92 97 55 - Sarti, \$56 - Strip F1 - Loan	2.5YR 2.5YR 7.5YR	con, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8); Matrix neral	ox Features	Type C C C	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8 NRCS Hydric	Bottom Depth 3 8 21 Soil Field In A1- Histosol A2 - Histic Eq. A3 - Black Hi A4 - Hydroge	PwA-Pewamo silty he depth needed to document the ind Horizon dicators (check he objeedon stic in Sulfide d Layers	clay loar icator or confirm Color 10YR 10YR 10YR	n, 0-1% the absence of Matrix (Moist) 3/1 2/1 cators a	Slopes Findicators.) (Type % 95 92 97	2.5YR 2.5YR 7.5YR y Gleyed I dy Redox ped Matrix	non, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8): Matrix neral Matrix	ox Features	Type C C C	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8 NRCS Hydric	Bottom Depth 3 8 21 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydragth A4 - Hydragth A4 - Hydragth A5 - Strafffec A10 - 2 cm M	PwA-Pewamo silty he depth needed to document the ind Horizon dicators (check he objeedon stic in Sulfide d Layers	clay loar clay reconfirm Color 10YR 10YR 10YR	n, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1 cators a	Slopes Indicators.) (Type % 95 92 97 55 - Sanc S6 - Strip F1 - Loan F3 - Deph F3 - Deph	2.5YR 2.5YR 7.5YR	non, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 4/8 5/8 Matrix neral Matrix	ox Features	Type C C C	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8 NRCS Hydric	Bottom Depth 3 8 21 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydragth A4 - Hydragth A4 - Hydragth A5 - Strafffec A10 - 2 cm M	PwA-Pewamo silty he depth needed to document the ind Horizon dicators (check he bipedon stic in Sulfide di Layers luck ed Below Dark Surface	clay loar clay reconfirm Color 10YR 10YR 10YR	m, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1 cators a	Slopes Findicators CType % 95 92 97	2.5YR 2.5YR 7.5YR	Color (Moist) 4/6 4/8 5/8 Natrix neral Matrix face Surface	ox Features	Type C C C	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8 NRCS Hydric	Bottom Depth 3 8 21 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	PwA-Pewamo silty he depth needed to document the ind Horizon dicators (check he bipedon stic in Sulfide d Layers luck ed Below Dark Surface bark Surface luck Mineral	clay loar clay reconfirm Color 10YR 10YR 10YR	n, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1 cators a	Slopes Findicators CType % 95 92 97	2.5YR 2.5YR 7.5YR	Color (Moist) 4/6 4/8 5/8 Natrix neral Matrix face Surface	ox Features	Type C C C sfor Problen A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay es
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8 NRCS Hydric	Bottom Depth 3 8 21 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	PwA-Pewamo silty he depth needed to document the ind Horizon dicators (check he bipedon stic on Sulfide d Layers luck ed Below Dark Surface bark Surface	clay loar clay reconfirm Color 10YR 10YR 10YR	m, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1 cators a	Slopes Findicators CType % 95 92 97	2.5YR 2.5YR 7.5YR	Color (Moist) 4/6 4/8 5/8 Natrix neral Matrix face Surface	ox Features	Type C C C sfor Problen A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8 NRCS Hydric	Bottom Depth 3 8 21 Soil Field In A1- Histosol A2 - Histic Eq. A3- Black Hi A4- Hydroge A5- Stratified A10 - 2 cm M A11- Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm M	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar clay reconfirm Color 10YR 10YR 10YR	m, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1 cators a	% 95 92 97	2.5YR 2.5YR 7.5YR	Color (Moist) 4/6 4/8 5/8 Natrix neral Matrix face Surface	ox Features % 5 8 3 Indicators Indicators of hydrophytes	Type C C C	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay es urface
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8 NRCS Hydric	Bottom Depth 3 8 21 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar clay reconfirm Color 10YR 10YR 10YR	m, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1 cators a	Slopes Findicators CType % 95 92 97	2.5YR 2.5YR 7.5YR	Color (Moist) 4/6 4/8 5/8 Natrix neral Matrix face Surface	ox Features	Type C C C	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay es
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8 NRCS Hydric	Bottom Depth 3 8 21 Soil Field In A1- Histosol A2 - Histic Eq. A3- Black Hi A4- Hydroge A5- Stratified A10 - 2 cm M A11- Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm M	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar clay reconfirm Color 10YR 10YR 10YR	m, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1 cators a	% 95 92 97	2.5YR 2.5YR 7.5YR	Color (Moist) 4/6 4/8 5/8 Natrix neral Matrix face Surface	ox Features % 5 8 3 Indicators Indicators of hydrophytes	Type C C C	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay es urface
SOILS Map Unit Name Profile Descrip Top Depth 0 3 8 NRCS Hydric	Bottom Depth 3 8 21 Soil Field In A1- Histosol A2 - Histic Eq. A3- Black Hi A4- Hydroge A5- Stratified A10 - 2 cm M A11- Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm M	PwA-Pewamo silty he depth needed to document the ind Horizon	clay loar clay reconfirm Color 10YR 10YR 10YR	m, 0-1% the absence of Matrix (Moist) 3/1 3/1 2/1 cators a	% 95 92 97	2.5YR 2.5YR 7.5YR	Color (Moist) 4/6 4/8 5/8 Natrix neral Matrix face Surface	ox Features % 5 8 3 Indicators Indicators of hydrophytes	Type C C C	Location PL M M	(e.g. clay, sand, loam) clay loam clay clay es urface



WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site: Vinmar Village Wetland 3 Sample Point: SP05

VEGETATION	(Species identified in all upp	ercase are non-na	ative spe	cies.)		
	t size: 30 ft radius)					
	Species Name		% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.	Quercus palustris		60	Υ	FACW	
2.	Salix nigra		20	Υ	OBL	Number of Dominant Species that are OBL, FACW, or FAC:4(A)
3.						
4.						Total Number of Dominant Species Across All Strata:4 (B)
5.						
6.						Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
7.						
8.						Prevalence Index Worksheet
9.						Total % Cover of: Multiply by:
10.						OBL spp
		Total Cover =	80			FACW spp
						FAC spp
	atum (Plot size: 15 ft radius)					FACU spp
1.	Salix nigra		5	Y	OBL	UPL spp
2.						
3.						Total(B)
4.						
5.						
6.						
7.						Hadronkadis Versetation Indicators
8.						Hydrophytic Vegetation Indicators:
9.						✓ Yes ☐ No Rapid Test for Hydrophytic Vegetation
10.		Total Cayon -	5			☑ Yes □ No Dominance Test is > 50%
		Total Cover =	5			☐ Yes ☐ No Prevalence Index is ≤ 3.0 *
						☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo			20	Y	ODI	☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	Carex frankii		20 5	N Y	OBL	* Indicators of hydric soil and wetland hydrology must be
2. 3.	Scirpus cyperinus		2	N N	OBL FACW	present, unless disturbed or problematic.
3. 4.	Pilea pumila					Definitions of Variation Strates
<u>4.</u> 5.						Definitions of Vegetation Strata:
6						Troo - W. J. J. C. (7.0.)
7.						Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
8.						Broadt Holgint (BBH), rogalidoso of Holgint
9.						Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.						ft. tall.
11.						
12.						Herb - All herbaceous (non-woody) plants, regardless of size,
13.						and woody plants less than 3.28 ft. tall.
14.						
15.						Woody Vines - All woody vines greater than 3.28 ft. in height.
10.		Total Cover =	27			Trody Tillesa) Tilles greater than one it in holgin
		TOTAL COVEL =	21			
Manda Mina Chat	(Diet einer 20 ft redire)					
1.	um (Plot size: 30 ft radius)					
2.						
3.						Hydrophytic Vegetation Present ☑ Yes ☐ No
4.						Tryatophytic rogotation resent a res a No
5.						
<u> </u>		Total Cover =	0			
Remarks:		. 5141 50701 -				
rtomanto.						
Additional Ren	narke:					
Auditional Ref	iiai no.					



WETLAND DETERMINATION DATA FORM Midwest Region

Drojoot/Sito:																		
Project/Site:	Vinmar Villa						Stantec Project #:	173409307		Date:	05/19/17							
Applicant:	Vinmar Inv	estment Limited								County:	Delaware							
Investigator #1:				Invest	gator #2:	Angela :	Sjollema			State:	Ohio							
Soil Unit:	Pw-Pewam	o silty clay loam, 0-	1% slope	es		١	IWI/WWI Classification:	PEM1C		Wetland ID:	Wetland 3							
Landform:	Terrace				al Relief:	Linear				Sample Point:	SP06							
Slope (%):	0	Latitude:	40 1907		ongitude:		532	Datum:	WGS 1984	Community ID:								
		ditions on the site ty						☑ Yes □	No	Section:								
						(II IIO, expia												
		or Hydrology □ sig					Are normal circumstar			Township:	Genoa							
		or Hydrology □ nat	turally pr	obiemat	IC?		Yes	NŪ		Range:	Dir:							
SUMMARY OF																		
Hydrophytic Ve	getation Pre	sent?		☐ Yes	✓ No			Hydric Soils	Present?		□ Yes ☑ No							
Wetland Hydrol	ogy Present	?		□ Yes	✓ No			Is This Samp	oling Point \	Nithin A Wetla	and? ■ Yes ⊠ No							
Remarks:																		
HYDROLOGY																		
Wetland Hydro	ology Indica	ators (Check here if	indicato	rs are n	ot presen	ıt ☑):												
Primary:	<u>.</u>								Secondary:									
	A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface So	oil Cracks							
	A2 - High Wa	ater Table				uatic Fauna				B10 - Drainage	Patterns							
	A3 - Saturation					e Aquatic I				C2 - Dry-Seaso								
	B1 - Water M					ogen Sulfi				C8 - Crayfish Bu								
	B2 - Sedimer						spheres on Living Roots				Visible on Aerial Imagery							
	B3 - Drift Dep						duced Iron				Stressed Plants							
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi								
	B5 - Iron Dep				C7 - Thin				ш	D5 - FAC-Neutr	al lest							
		on Visible on Aerial Ima Vegetated Concave S			Other (Ex	ge or Well												
	bo - Sparsery	vegetated Concave 3	ullace		Other (Ex	piaiii iii re	marks)											
Field Observat																		
Surface Water	Present?	□ Yes ☑ No	Depth:		(in.)			Wetland Hyd	drology Pr	esent?	Yes ☑ No							
Water Table Pr	esent?	□ Yes ☑ No	Depth:		(in.)			vvctiana my	arology i i		165 = 116							
Saturation Pres	ent?	□ Yes ☑ No	Depth:		(in.)													
Dogoribo Booord	ad Data (atra	am gauge, monitoring	n woll oo	rial photo	o proviou	o inonceti	ana) if available:		N/A									
	eu Dala (Sile	am gauge, monitoring	y well, ac	ιιαι μιιοις	is, previou	s mspecu	ons), ii avaliable.		IVA									
Remarks:																		
SOILS																		
Map Unit Name		Pw-Pewamo silty cl																
Map Unit Name						oe: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS=C	Covered/Coated Sand Grai	ins; Location: PL=Po	re Lining, M=Matrix)								
Map Unit Name					findicators.) (Typ	ne: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS=C	Covered/Coated Sand Grai	ins; Location: PL=Po	re Lining, M=Matrix)	Texture							
Map Unit Name Profile Descrip Top	Bottom (Describe to t	the depth needed to document the ind	icator or confirm	the absence o	f indicators.) (Typ	e: C=Concentral	Redo	ox Features	1									
Map Unit Name Profile Descrip Top Depth	Bottom (Describe to to Bottom Depth	the depth needed to document the ind	Color	Matrix (Moist)	f indicators.) (Typ				Туре	Location	(e.g. clay, sand, loam)							
Map Unit Name Profile Descrip Top Depth 0	Bottom (Describe to	the depth needed to document the ind Horizon	Color 7.5YR	Matrix (Moist) 2.5/1	% 100		Color (Moist)	x Features %	Type 	Location	(e.g. clay, sand, loam)							
Map Unit Name Profile Descrip Top Depth 0 14	Bottom (Describe to to Depth 14 21	the depth needed to document the ind Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1	% 100 90	 2.5YR	Redo	ox Features	Type C	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0	Bottom (Describe to	the depth needed to document the ind Horizon	Color 7.5YR	Matrix (Moist) 2.5/1	% 100		Color (Moist)	x Features %	Type 	Location	(e.g. clay, sand, loam)							
Map Unit Name Profile Descrip Top Depth 0 14	Bottom (Describe to to Depth 14 21	the depth needed to document the ind Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1	% 100 90	 2.5YR	Color (Moist)	x Features %	Type C	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14	Bottom Depth 14 21	the depth needed to document the ind Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1	% 100 90	2.5YR	Color (Moist)	x Features %	Type C 	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14	Bottom Depth 14 21	the depth needed to document the ind Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1	% 100 90	2.5YR 	Color (Moist)	x Features %	Type C	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14	Depth Depth 14 21	He depth needed to document the ind Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1 	% 100 90	2.5YR 	Redo Color (Moist)	% 10	Type C	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14	btion (Describe to Describe to Depth 14 21	Herizon	Color 7.5YR	Matrix (Moist) 2.5/1 2.5/1	% 100 90	 2.5YR 	Redo Color (Moist) 4/8	% 10	Type C	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14	btion (Describe to: Bottom Depth 14 21	Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1	% 100 90	 2.5YR 	Redo Color (Moist)	% 10	Type C	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14	btion (Describe to: Bottom Depth 14 21	Herizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1	% 100 90	 2.5YR 	Redo Color (Moist)	% 10	Type C	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric	btion (Describe to: Bottom Depth 14 21 Soil Field In A1- Histosol	Horizon	Color 7.5YR 7.5YR	the absence of Matrix (Moist) 2.5/1 2.5/1 cators a	% 100 90 S4 - Sanc	2.5YR	Redo Color (Moist) 4/8	x Features % 10 10 Indicators	Type C for Problem A16 - Coast	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric	btion (Describe to: Bottom Depth 14 21 Soil Field In A1- Histosol A2 - Histic Ep	Horizon	Color 7.5YR 7.5YR	the absence of Matrix (Moist) 2.5/1 2.5/1	% 100 90 S4 - Sanc S5 - S	2.5YR esent dy Gleyed	Redo Color (Moist) 4/8 Watrix	x Features % 10 Indicators	Type C for Problem S7 - Dark St	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric	btion (Describe to: Bottom Depth 14 21 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A3 - Black Hi	Horizon	Color 7.5YR 7.5YR	the absence of Matrix (Moist) 2.5/1 2.5/1	% 100 90	2.5YR	Redo Color (Moist) 4/8): Matrix	x Features % 10 Indicators	Type C for Problem A16 - Coast S7 - Dark St. F12 - Iron-M	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric	btion (Describe to: Bottom Depth 14 21 Soil Field In A1- Histosol A2 - Histic Eg. A3 - Black Hi A4 - Hydroge	Horizon	Color 7.5YR 7.5YR	the absence of Matrix (Moist) 2.5/1 2.5/1 cators a	% 100 90 e not pre S4 - Sanc S5 - Sart S6 - Strip F1 - Loan	2.5YR sent dy Gleyed dy Redox ped Matrix ny Muck My	Redo Color (Moist) 4/8): Matrix	nx Features % 10 10 Indicators	Type C for Problem A16 - Coast S7 - Dark Su F12 - Iron-M TF12 - Very	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric	btion (Describe to: Bottom Depth 14 21 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifiec	Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1 cators a	% 100 90	2.5YR	Redo Color (Moist) 4/8): Matrix neral Matrix	nx Features % 10 10 Indicators	Type C for Problem A16 - Coast S7 - Dark Su F12 - Iron-M TF12 - Very	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric	btion (Describe to: Bottom Depth 14 21 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratiffec A10 - 2 cm M	Horizon	Color 7.5YR 7.5YR	the absence of Matrix (Moist) 2.5/1 2.5/1 cators al	% 100 90	2.5YR	Redo Color (Moist) 4/8): Matrix Ineral Matrix	nx Features % 10 10 Indicators	Type C for Problem A16 - Coast S7 - Dark Su F12 - Iron-M TF12 - Very	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric	btion (Describe to: Bottom Depth 14 21 Soil Field In A1 - Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete	Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1	% 100 90 re not pre S4 - Sanc S6 - Strip F1 - Loan F2 - Loan F2 - Depl F6 - Red C6 - Red	2.5YR	Redo Color (Moist) 4/8): Watrix Ineral Matrix Inface	nx Features % 10 10 Indicators	Type C for Problem A16 - Coast S7 - Dark Su F12 - Iron-M TF12 - Very	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric	btion (Describe to: Bottom Depth 14 21 Soil Field In A1- Histosol A2 - Histic Eg. A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplete A12 - Thick E	Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1	% 100 90	2.5YR	Redo Color (Moist) 4/8): Matrix Ineral Matrix Inface Surface Surface	nx Features % 10 10 Indicators	Type C for Problem A16 - Coast S7 - Dark Su F12 - Iron-M TF12 - Very	Location M	(e.g. clay, sand, loam) clay clay							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric	btion (Describe to: Bottom Depth 14 21 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1	% 100 90	2.5YR	Redo Color (Moist) 4/8): Matrix Ineral Matrix Inface Surface Surface ions	nx Features % 10 10 Indicators	Type C for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Explain	Location M	(e.g. clay, sand, loam) clay clay es							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric	btion (Describe to: Bottom Depth 14 21 Soil Field In A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm ML	Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1 cators a	% 100 90	2.5YR	Redo Color (Moist) 4/8): Matrix Ineral Matrix Inface Surface Surface ions	nx Features % 10 10 Indicators	Type C	Location M	(e.g. clay, sand, loam) clay clay es urface							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric	btion (Describe to: Bottom Depth 14 21 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1	% 100 90	2.5YR	Redo Color (Moist) 4/8): Matrix Ineral Matrix Inface Surface Surface ions	nx Features % 10 10 Indicators	Type C	Location M	(e.g. clay, sand, loam) clay clay es							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric Restrictive Layer (If Observed)	btion (Describe to: Bottom Depth 14 21 Soil Field In A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm ML	Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1 cators a	% 100 90	2.5YR	Redo Color (Moist) 4/8): Matrix Ineral Matrix Inface Surface Surface ions	nx Features % 10 10 Indicators	Type C	Location M	(e.g. clay, sand, loam) clay clay es urface							
Map Unit Name Profile Descrip Top Depth 0 14 NRCS Hydric	btion (Describe to: Bottom Depth 14 21 Soil Field In A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm ML	Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 2.5/1 cators a	% 100 90	2.5YR	Redo Color (Moist) 4/8): Matrix Ineral Matrix Inface Surface Surface ions	nx Features % 10 10 Indicators	Type C	Location M	(e.g. clay, sand, loam) clay clay es urface							



WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site: Vinmar Village Wetland 3 Sample Point: SP06

VEGETATION	(Species identified in all uppercase are non-na	ative spec	cies.)		
	t size: 30 ft radius)		,		
	Species Name	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.	Gleditsia triacanthos	40	Υ	FACU	
2.	Prunus serotina	10	N	FACU	Number of Dominant Species that are OBL, FACW, or FAC:1 (A)
3.	Pyrus calleryana	5	N	UPL	
4.					Total Number of Dominant Species Across All Strata:6 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 17% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 0 x 1 = 0
	Total Cover =	55			FACW spp 0
					FAC spp. 20 $x 3 = 60$
_	atum (Plot size: 15 ft radius)				FACU spp. 210 x 4 = 840
1.	Acer rubrum	5	Y	FAC	UPL spp. $10 x 5 = 50$
2.	Lonicera morrowii	5	Y	FACU	
3.					Total <u>240</u> (A) <u>950</u> (B)
4.					
5.			-		Prevalence Index = B/A = 3.958
6.	<u></u>				
7.			-		
8.	-		-		Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.	-				☐ Yes ☑ No Dominance Test is > 50%
	Total Cover =	10			☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo			.,	E4 011	☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	Solidago canadensis	60	Y	FACU	* Indicators of hydric soil and wetland hydrology must be
2.	Rubus allegheniensis	15	N	FACU	present, unless disturbed or problematic.
3.	Toxicodendron radicans	10	N	FAC	Definitions of Venetation Otrate.
4.	Acer rubrum	5	N N	FAC	Definitions of Vegetation Strata:
5. 6	Daucus carota	5	N N	UPL	T
	Parthenocissus quinquefolia	5		FACU	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
7.					breast neight (bbir), regardless or neight.
8. 9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
9. 10.	-				ft. tall.
11. 12.					Herb - All herbaceous (non-woody) plants, regardless of size,
13.	_ 				and woody plants less than 3.28 ft. tall.
13.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
10.	Total Cover =	100			VYOODY VIIIes - All Woody VIIIes greater than 0.20 ft. in neight.
	rotal Cover =	100			
Woody Vine Ctt-	um (Plot size: 30 ft radius)				
1.	ım (Plot size: 30 π radius) Rubus allegheniensis	40	Υ	FACU	
2.	Rosa multiflora	35	Y	FACU	
3.			<u> </u>		Hydrophytic Vegetation Present □ Yes ☑ No
4.					Tryatophytic regulation resent a res a No
5.					
J.	Total Cover =	75		-	
Remarks:	10101 00401 -				
. tomanto.					
Additional Ban					

VINMAR VILLAGE WETLAND AND WATERBODY DELINEATION REPORT

Appendix B June 9, 2017

ORAM Forms



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

Instructions

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

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

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

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

Background Information

Name: J. Nietz
Date: 5/19/17
Affiliation: Startec Consulting
Address: 1500 Lake Shore Drive, Columbus, OH 43204
Phone Number: 614 - 643 - 4389
e-mail address: jennifer, nietz @ stantec, com
Name of Wetland
Vegetation Communit(ies):
HGM Class(es): Depression
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.
Bain Sain
old field sain
Olivera Swedland =
Olivero welland
Lat/Long or UTM Coordinate 40.189303, -82.89791
USGS Quad Name Galera, OH
County Delaware
Township Genda
Section and Subsection
Hydrologic Unit Code OSO600011308
Site Visit
National Wetland Inventory Map Jes
Ohio Wetland Inventory Map
Soil Survey Delaware Co. Soil Survey - Be A
Delaware Co. Soil Survey - Be A Delineation report/map Vinnar Villiage Wetland and Waterbody Delineation Report

Name of Wetland: Wetland	
Wetland Size (acres, hectares): 0,078 acre	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. Bain	
0 ld field	0
2 wedland	
= housing ald Field.	S S
Olivero ane forested fence row	
Comments, Narrative Discussion, Justification of Category Changes:	
	a
Final score : Category	/ :

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single 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.	\triangle	
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.		\triangle
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	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	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 V 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 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 spans 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.	NO Go to Question 9a
		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?	Wetland should be evaluated for possible Category 3 status	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.	Go to Question 10 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	YES T	NO IS 7
	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	Wetland is a Category 3 wetland.	Go to Question 11
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Go to Question 11	
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union 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	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensi.
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis strict
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherode.
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumi
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellit
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwell
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrews
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratu
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicat
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflor
71 0	Parnassia glauca	Schechzeria palustris		Lythrum alatui
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianui
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceu
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutan
	Salix candida	Vaccinium oxycoccos		Spartina pectinal
	Salix myricoides	Woodwardia virginica		Solidago riddell
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site:	wet	an	dl	Rater(s): ブ,	Vietz.		Date: 5/19/17
0	7)	М	etric 1. Wetland A	rea (size).			
max 6 pts.	subtotal	ן Sel∉	ect one size class and assign sco	re.			
			>50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to <2				
			10 to <25 acres (4 to <10.1	ha) (4 pts)			
			3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1.				
			0.1 to <0.3 acres (0.04 to <	0.12ha) (1 pt)			
		1	<0.1 acres (0.04ha) (0 pts)				
max 14 pts.	Subtotal		etric 2. Upland bu				•
max 14 pts.	SUDIOIAI	2a.	Calculate average buffer width. WIDE. Buffers average 50	m (164ft) or more arou	nd wetland pe	rimeter (7)	
			MEDIUM. Buffers average NARROW. Buffers average	25m to <50m (82 to <	164ft) around	wetland perimeter (4)	1
			VERY NARROW. Buffers	average <10m (<32ft) a	around wetlan-	d perimeter (0)	1
		2b.	Intensity of surrounding land use VERY LOW. 2nd growth o	. Select one or double	check and av	verage.	
		ч	LOW. Old field (>10 years), shrub land, young se	cond growth for	orest. (5)	
			MODERATELY HIGH. Res	sidential, fenced pastur oen pasture, row cropp	e, park, conse ing, mining, co	ervation tillage, new fall	low field. (3)
7	15	٦м٥	etric 3. Hydrology			onou douom (7)	
	15	'''		•			
max 30 pts.	subtotal	3 a.	Sources of Water. Score all that	apply.	3b.	Connectivity. Score al	I that apply.
			High pH groundwater (5) Other groundwater (3)			100 year floodpl Between stream	ain (1) /lake and other human use (1)
		1	Precipitation (1)	(0)	1	Part of wetland/u	upland (e.g. forest), complex (1)
			Seasonal/Intermittent surfa Perennial surface water (la		3d.		or upland corridor (1) sturation. Score one or dbl check.
		Зс.	Maximum water depth. Select or	nly one and assign sco	re.	Semi- to permar	nently inundated/saturated (4)
		ï	>0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in)	(2)	1	Seasonally inunda	ated/saturated (3) dated (2)
		30	<0.4m (<15.7in) (1)		e decide alcas	Seasonally satu	rated in upper 30cm (12in) (1)
		JG.	Modifications to natural hydrolog None or none apparent (12)			k and average.	
		2	Recovered (7)	ditch	000 00001 100	point source (no	nstormwater)
		3	Recovering (3) Recent or no recovery (1)	tile		filling/grading road bed/RR tra	ck
			, , , , ,	weir		dredging	12 L 201 W.
		1		stormwater in		X other problem	Installation
6	21	┚	etric 4. Habitat Al			pment.	
max 20 pts.	subtotal	4a.	Substrate disturbance. Score on None or none apparent (4)		average.		
		1	Recovered (3)				
		1	Recovering (2) Recent or no recovery (1)				
		4b.	Habitat development. Select onl	y one and assign score).		
			Excellent (7) Very good (6)				
			Good (5)				
		7	Moderately good (4) Fair (3)				
		2	X Poor to fair (2)				
		4c.	Poor (1) Habitat alteration. Score one or	double check and aver	age.		
			None or none apparent (9)	Check all disturband			
		3	Recovered (6) Recovering (3)	mowing		shrub/sapling re	
			Recent or no recovery (1)	grazing clearcutting		sedimentation	atic bed removal
	21			selective cutting woody debris		dredging	
	9]		toxic pollutant		farming nutrient enrichm	
last revised	ubtotal this p		01 iim			(x) construction	1
100 L L CA196(a i i enida	س∠ لا اند	ا الرازات				

Site:	Wetle	and 1	Ra	iter(s): J	Niela	Date: 5/19/17
max 10 pts.	2 ubtotal first pa	Me	tric 5. Special Wet			
			Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetl Lake Erie coastal/tributary wetl Lake Plain Sand Prairies (Oak Relict Wet Prairies (10) Known occurrence state/federa Significant migratory songbird/v Category 1 Wetland. See Que	and-restricted hyd Openings) (10) al threatened or er water fowl habitat stion 1 Qualitative	drology (5) ndangered species (1 or usage (10) e Rating (-10)	
-3	8					n, microtopography.
max 20 pts.	subtotal		Vetland Vegetation Communities.	Vegetation	on Community Cove	er Scale
		Score	all present using 0 to 3 scale.	0	Absent or comp	rises <0.1ha (0.2471 acres) contiguous area
			Aquatic bed	1		ner comprises small part of wetland's
			Emergent			d is of moderate quality, or comprises a
			Shrub			t but is of low quality
			Forest	2		ner comprises significant part of wetland's
		Γ	Mudflats		vegetation an	d is of moderate quality or comprises a small
			Open water		part and is of	
			Other	3	Present and cor	mprises significant part, or more, of wetland's
		6b. h	orizontal (plan view) Interspersion.		vegetation an	d is of high quality
			t only one.	**		
		Г	High (5)	Narrative	Description of Veg	etation Quality
		F	Moderately high(4)	low		ty and/or predominance of nonnative or
		1	Moderate (3)			plerant native species
		1	Moderately low (2)	mod		dominant component of the vegetation,
		2 -	X Low (1)			native and/or disturbance tolerant native spp
		H	None (0)			resent, and species diversity moderate to
		60 C	Coverage of invasive plants. Refer		moderately hi	gh, but generally w/o presence of rare
			ble 1 ORAM long form for list. Add			endangered spp
			duct points for coverage	high		e of native species, with nonnative spp
		OI GE	Extensive >75% cover (-5)	ingii		pance tolerant native spp absent or virtually
		000	Moderate 25-75% cover (-3)			igh spp diversity and often, but not always,
	-	5 F				of rare, threatened, or endangered spp
		-	Sparse 5-25% cover (-1)	-	the presence	or fare, threatened, or endangered opp
		-	Nearly absent <5% cover (0)	Mudflot	and Open Water Cla	es Quality
		a. L	Absent (1)		Absent <0.1ha	
			Aicrotopography.	0	TO AND THE PROPERTY OF THE PRO	a (0.247 to 2.47 acres)
		Score	e all present using 0 to 3 scale.			
		-	Vegetated hummucks/tussuck			<4ha (2.47 to 9.88 acres)
		L	Coarse woody debris >15cm (High 4ha (9.88	acres) or more
			Standing dead >25cm (10in) d			alo.
		L	Amphibian breeding pools		ography Cover Sca	nie
				0	Absent	will amounts or if more common
				1		nall amounts or if more common
			391		of marginal q	
				2		lerate amounts, but not of highest mall amounts of highest quality
				3	Present in mod	erate or greater amounts
0	7				and of highes	st quality

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	N	If yes, Category 3.
	Question 2. Threatened or Endangered Species		If yes, Category 3.
	Question 3. High Quality Natural Wetland		If yes, Category 3.
	Question 4. Significant bird habitat	V	If yes, Category 3.
	Question 5. Category 1 Wetlands	Y	If yes, Category 1.
	Question 6. Bogs	N	If yes, Category 3.
	Question 7. Fens		If yes, Category 3.
	Question 8a. Old Growth Forest		If yes, Category 3.
	Question 8b. Mature Forested Wetland		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants		If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		If yes, Category 3
	Question 11. Relict Wet Prairies		If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
9	Metric 2. Buffers and surrounding land use	8	
	Metric 3. Hydrology	7	
	Metric 4. Habitat	6	
	Metric 5. Special Wetland Communities	-10	
	Metric 6. Plant communities, interspersion, microtopography	-3	
	TOTAL SCORE	8	Category based on scor breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category				
Choose one	Category 1	Category 2	Category 3	
	(

End of Ohio Rapid Assessment Method for Wetlands.

Version 5.0 Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet

Instructions

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

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

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

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

Background Information

Name: J. Nietz	
Date: 5/19/17	
Affiliation: Stantec	
Address: 1500 Lake Share Or, Suite 100, Columbus, OH 43:	704
Phone Number: 64-643-4893	<u> </u>
e-mail address: jennifer, nietz @ Stantec, com	*
Name of Wetland: Wetland 2	
Vegetation Communit(ies):	8
HGM Class(es): Depression	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
\mathcal{N}	Y
forest	10
70162	012 30
Societ/Fence	10
- Jacest/Tence	
ag field og field	T. Sava
In the state of th	
an field and field	()
as till	2
	2
	. 1
Olivero Priv	1/20
	and the second second
Lat/Long or UTM Coordinate 40.19229 1, -82.902577	
USGS Quad Name Galera, OH	
County Delaware	
Township Genoa	*
Section and Subsection N/A	
Hydrologic Unit Code 05060001(308	
Site Visit 5/19/17	
National Wetland Inventory Map	
Ohio Wetland Inventory Map	
Soil Survey Delaware Co. Soil Survey - Be A	
Delineation report/map Vin mar Villiage Wetland and Waterbody Delineation Re	port
All will Alling Action on the agent a second a second as the second as t	

Name of Wetland: Wetland Size (acres, hectares): Sketch: Include north arrow, rela	O.O.72 acre ationship with other surface waters, vegetation zones, etc.	
Forest Chamelined Stream	wetland Forested Fence row	old 36 Hwy
ditched stream For	Ag Field st dential development	olivero Or.
Comments, Narrative Discussio	n, Justification of Category Changes:	
Final score: 26	Cate	egory:

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.		V
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	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 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 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?	Wetland should be evaluated for possible Category 3 status.	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?	Go to Question 9a 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	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.	Go to Question 10 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	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

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

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

Site: We	tlan	ત ર	Rater(s): J. Mietz		Date: 5/19/17
00		etric 1. Wetland A		*	
max 6 pts. subt		act one size class and assign scor >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1.0 0.1 to <0.3 acres (0.04 to <1.0 <0.1 acres (0.04ha) (0 pts)	0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts) 0.12ha) (1 pt)		
11	Me	etric 2. Upland bu	ffers and surroun	ding land use.	ä
max 14 pts. subt	0	MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers a Intensity of surrounding land use. VERY LOW. 2nd growth or LOW. Old field (>10 years) MODERATELY HIGH. Res	m (164ft) or more around wetland 25m to <50m (82 to <164ft) arou e 10m to <25m (32ft to <82ft) aro average <10m (<32ft) around wet	perimeter (7) and wetland perimeter (4) bund wetland perimeter (1) land perimeter (0) d average. vildlife area, etc. (7) th forest. (5) aservation tillage, new fallo	ow field. (3)
5 0	Me	etric 3. Hydrology			
max 30 pts. subt	3c.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfar Perennial surface water (lal Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in)			

Site: wetland 2 Rater	s): T,	Nix17 Date: 5/19/17
17		
subtotal first page Mottrio 5 Special Wotland	de	
Metric 5. Special Wetland	us.	
max 10 pts. subtotal Check all that apply and score as indicated.		
Bog (10) Fen (10)		
Old growth forest (10)		
Mature forested wetland (5)		
Lake Erie coastal/tributary wetland-ur Lake Erie coastal/tributary wetland-re		
Lake Plain Sand Prairies (Oak Openii		siogy (o)
Relict Wet Prairies (10)		
Known occurrence state/federal threa		
Significant migratory songbird/water f Category 1 Wetland. See Question 1		
Matrie 6 Plant communit		terspersion, microtopography.
9 26 Wetric 6. Plant communi		
max 20 pts. subtotal 6a. Wetland Vegetation Communities.		Community Cover Scale
Score all present using 0 to 3 scale. Aquatic bed	0	Absent or comprises <0.1ha (0.2471 acres) contiguous area Present and either comprises small part of wetland's
Emergent	20	vegetation and is of moderate quality, or comprises a
Shrub		significant part but is of low quality
3 2 Forest	2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small
Mudflats Open water		part and is of high quality
Other	3	Present and comprises significant part, or more, of wetland's
6b. horizontal (plan view) Interspersion.		vegetation and is of high quality
Select only one. High (5)	Narrative [Description of Vegetation Quality
Moderately high(4)	low	Low spp diversity and/or predominance of nonnative or
Moderate (3)		disturbance tolerant native species
ivioderately low (2)	mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp
Low (1) None (0)		can also be present, and species diversity moderate to
6c. Coverage of invasive plants. Refer		moderately high, but generally w/o presence of rare
to Table 1 ORAM long form for list. Add		threatened or endangered spp
or deduct points for coverage Extensive >75% cover (-5)	high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually
Moderate 25-75% cover (-3)		absent, and high spp diversity and often, but not always,
Sparse 5-25% cover (-1)		the presence of rare, threatened, or endangered spp
Nearly absent <5% cover (0) Absent (1)	Mudflat an	nd Open Water Class Quality
6d. Microtopography.	0	Absent <0.1ha (0.247 acres)
Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 acres)
Vegetated hummucks/tussucks Coarse woody debris >15cm (6in)	3	Moderate 1 to <4ha (2.47 to 9.88 acres) High 4ha (9.88 acres) or more
2 Standing dead >25cm (10in) dbh		
Amphibian breeding pools		graphy Cover Scale
	0	Absent 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
26	-	

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	N	If yes, Category 3.
	Question 2. Threatened or Endangered Species		If yes, Category 3.
	Question 3. High Quality Natural Wetland		If yes, Category 3.
	Question 4. Significant bird habitat		If yes, Category 3.
	Question 5. Category 1 Wetlands		If yes, Category 1.
	Question 6. Bogs		If yes, Category 3.
	Question 7. Fens		If yes, Category 3.
	Question 8a. Old Growth Forest		If yes, Category 3.
	Question 8b. Mature Forested Wetland		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants		If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		If yes, Category 3
	Question 11. Relict Wet Prairies	V	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
Ü	Metric 2. Buffers and surrounding land use		
	Metric 3. Hydrology	5	
	Metric 4. Habitat	11	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	9	
	TOTAL SCORE	26	Category based on score breakpoints

 ${\bf Complete\ Wetland\ Categorization\ Worksheet}.$

Wetland Categorization Worksheet

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

Final Category					
Choose one	Category 1	Category 2	Category 3		
	X		,		

End of Ohio Rapid Assessment Method for Wetlands.

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

Instructions

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

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

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

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

Background Information

Name: J. Nietz
Date: 5/19/17
Affiliation: Startec
Address: 1500 Lake Shore Drive, Suite 100, Columbus, OH 43207
Phone Number: 6(4 - 64 3 - 4389
e-mail address: Jennifer, nietz@stantec, com
Name of Wetland: wetland 3
Vegetation Communit(ies):
HGM Class(es): Depression
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.
Ag Tield PEM PaB PEM
Ag tiell wellow PFO wether
Revidential Development
Lat/Long or UTM Coordinate 40.191017, -82.901379
USGS Quad Name Galera, Ott
County Delaware.
Township Genoa
Section and Subsection NA
Hydrologic Unit Code OSO600011308
Site Visit S/19/17
National Wetland Inventory Map
Ohio Wetland Inventory Map
Soil Survey Delaware Co. Soil Survey - PWA
Delineation report/map Vinnar Villiage Wetland and water hodey Delineation Report

Name of Wetland: Wetland 3	
Wetland Size (acres, hectares): 0.43 acre	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. We want for the Publication of the	DIA 36 Hay
As Field Residential development Chiera	Drive
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 45	

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.		\square
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
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). Threatened or Endangered Species. Is the wetland known to contain	YES Wetland should be evaluated for possible Category 3 status Go to Question 2 YES	NO Go to Question 2
	an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the 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	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 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.	NO Go to Question 9a
		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	NO V Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
71 0	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis	3		
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site: Wes	rland 3	Rater(s): J. Nicta	2	Date: 5//1//7
2 2	Metric 1. Wetland A			
max 6 pts. subtotal	Select one size class and assign sco	ore.		
	>50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to <	i) 20.2ha) (5 pts)		
	10 to <25 acres (4 to <10. 3 to <10 acres (1.2 to <4h	1ha) (4 pts)		
	0.3 to <3 acres (0.12 to <1	.2ha) (2pts)		
	0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts			
1 3	Metric 2. Upland bu	ıffers and surround	ing land use.	
max 14 pts. subtotal	za. galagiata artifago ballor matri.	Select only one and assign score. [On (164ft) or more around wetland p		2
	MEDIUM. Buffers average	e 25m to <50m (82 to <164ft) around ge 10m to <25m (32ft to <82ft) aroun	l wetland perimeter (4)	
	VERY NARROW. Buffers	average <10m (<32ft) around wetlan	nd perimeter (0)	
	VERY LOW. 2nd growth of	 Select one or double check and a or older forest, prairie, savannah, wile 	dlife area, etc. (7)	
		s), shrub land, young second growth esidential, fenced pasture, park, cons		ow field. (3)
	HIGH. Urban, industrial, o	ppen pasture, row cropping, mining, o	construction. (1)	(2)
19 92	Metric 3. Hydrology	y.		
max 30 pts. subtotal	ou. <u>sourous</u> of traisir sours all the	t apply. 3b.	Connectivity. Score all	
	High pH groundwater (5) Other groundwater (3)	0	100 year floodpla	ain (1) lake and other human use (1)
	6 Precipitation (1) Seasonal/Intermittent surf	O ace water (3)	Part of wetland/u	pland (e.g. forest), complex (1) r upland corridor (1)
	Perennial surface water (la	ake or stream) (5) 3d.	Duration inundation/sat	uration. Score one or dbl check
	3c. Maximum water depth. Select of >0.7 (27.6in) (3)	y	Regularly inunda	ently inundated/saturated (4) ted/saturated (3)
	2 0.4 to 0.7m (15.7 to 27.6ir <0.4m (<15.7in) (1)	i) (2)	Seasonally inund	lated (2) ated in upper 30cm (12in) (1)
	3e. Modifications to natural hydrolog			
	None or none apparent (1 X Recovered (7)	Check all disturbances observed ditch	point source (nor	nstormwater)
	Recovering (3) Recent or no recovery (1)	tile dike	filling/grading road bed/RR trace	ek =
	, (.,	weir stormwater input	dredging	nage
	Madria 4 Habitat A			non-
9 31	Wetric 4. Habitat A	Iteration and Develo	opment.	*
max 20 pts. subtotal	4a. Substrate disturbance. Score o			
	Recovered (3)	1		
	Recovering (2) Recent or no recovery (1)			
	4b. Habitat development. Select or Excellent (7)	ly one and assign score.		
	Very good (6)			
	Moderately good (4)			
	Fair (3) Poor to fair (2)			
	Poor (1) 4c. Habitat alteration. Score one or	double check and average		2
	None or none apparent (9	Decreased and	1	
	Recovered (6) Recovering (3)	mowing grazing	shrub/sapling rer	
	Recent or no recovery (1)	clearcutting	sedimentation	
31		selective cutting woody debris removal	dredging farming	
subtotal this	page	toxic pollutants	nutrient enrichme	ent
last revised 1 Febru	• •	ţa.		

Site: \	wetl	and 3	2	Rater(s	s): J,	Nietz	Date: 5//4//7
sut	31 ototal first pa	ge					
6	31	Metric	5. Special W	/etland	ds.		
max 10 pts.	subtotal	Bo	t apply and score as ind g (10) n (10) I growth forest (10)	dicated.			
		Ma Lal	ture forested wetland (ce Erie coastal/tributary ce Erie coastal/tributary ce Plain Sand Prairies (wetland-un wetland-res	stricted hyd		
		Re Kn Sig	lict Wet Prairies (10) own occurrence state/fi inificant migratory song tegory 1 Wetland. See	ederal threa bird/water fo	tened or en owl habitat o	or usage (10)	
14	45	Metric	6. Plant con	nmunit	ties, in	terspersion, mic	rotopography.
max 20 pts.	subtotal		Vegetation Communitie	es.	vegetatio 0	Absent or comprises <0.1h	na (0.2471 acres) contiguous area
			sent using 0 to 3 scale. uatic bed			Present and either comprise	
		Em	nergent rub		-1		erate quality, or comprises a
	3	Mu	rest dflats en water		2		ses significant part of wetland's erate quality or comprises a small
		6b. horizonta	ner al (plan view) Interspers	sion.	3		nificant part, or more, of wetland's
		Select only o			N	D	114
			gh (5)			Description of Vegetation Qu	
		3 X Mc	derately high(4) derate (3)		low	disturbance tolerant nativ	redominance of nonnative or ve species omponent of the vegetation,
		Lo	derately low (2) w (1) ne (0)		mod	although nonnative and/	or disturbance tolerant native spp I species diversity moderate to
		6c. Coverag	e of invasive plants. ReRAM long form for list.				nerally w/o presence of rare
			nts for coverage tensive >75% cover (-5	5)	high	and/or disturbance tolera	species, with nonnative spp ant native spp absent or virtually
	-1	Sp	oderate 25-75% cover (arse 5-25% cover (-1)				ersity and often, but not always, eatened, or endangered spp
	'		arly absent <5% cover	(0)	Mudflet	nd Onen Water Class Quality	
		6d. Microtop	sent (1)		0	Absent <0.1ha (0.247 acr	
			sent using 0 to 3 scale.		1	Low 0.1 to <1ha (0.247 to	
			getated hummucks/tus		2	Moderate 1 to <4ha (2.47	
	_		arse woody debris >15		3	High 4ha (9.88 acres) or n	
		St	anding dead >25cm (10	in) dbh			
		2 An	nphibian breeding pool	S		ography Cover Scale	
					0	Absent	
					1	Present very small amoun of marginal quality	
					2	Present in moderate amou	nts of highest quality
					3	Present in moderate or gre	eater amounts
45						and of highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

1	No.	circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	N	If yes, Category 3.
	Question 2. Threatened or Endangered Species	(If yes, Category 3.
	Question 3. High Quality Natural Wetland		If yes, Category 3.
	Question 4. Significant bird habitat		If yes, Category 3.
	Question 5. Category 1 Wetlands		If yes, Category 1.
	Question 6. Bogs		If yes, Category 3.
	Question 7. Fens		If yes, Category 3.
	Question 8a. Old Growth Forest		If yes, Category 3.
	Question 8b. Mature Forested Wetland		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants		If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		If yes, Category 3
	Question 11. Relict Wet Prairies	V	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		
	Metric 3. Hydrology	19	
	Metric 4. Habitat	9	
	Metric 5. Special Wetland Communities	0	TANKE IN
	Metric 6. Plant communities, interspersion, microtopography	14	
	TOTAL SCORE	45	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

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

End of Ohio Rapid Assessment Method for Wetlands.

VINMAR VILLAGE WETLAND AND WATERBODY DELINEATION REPORT

Appendix C June 9, 2017

Appendix C

Photographs







Photo Location 1. View of Wetland 1. Photograph taken facing north.



Photo Location 1. View of Wetland 1. Photograph taken facing east.





Photo Location 1. View of Wetland 1. Photograph taken facing south.



Photo Location 1. View of Wetland 1. Photograph taken facing west.





Photo Location 2. View of Wetland 2. Photograph taken facing north.



Photo Location 2. View of Wetland 2. Photograph taken facing east.





Photo Location 2. View of Wetland 2. Photograph taken facing south.



Photo Location 2. View of Wetland 2. Photograph taken facing west.





Photo Location 3. View of Wetland 3. Photograph taken facing north.



Photo Location 3. View of Wetland 3. Photograph taken facing east.





Photo Location 3. View of Wetland 3. Photograph taken facing south.



Photo Location 3. View of Wetland 3. Photograph taken facing west.





Photo Location 4. Upstream view of Stream 1. Photograph taken facing northwest.



Photo Location 4. Downstream view of Stream 1. Photograph taken facing southeast.





Photo Location 5. Upstream view of Stream 2. Photograph taken facing west.



Photo Location 5. Downstream view of Stream 2. Photograph taken facing east.



Attachment B Preliminary Jurisdictional Determination Form

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): June 2017

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Applicant: Vinmar Investment Limited

148 West Schrock Road Westerville, Ohio 43081

Agent: Jennifer Nietz

Stantec Consulting Services Inc. (Stantec)

1500 Lake Shore Drive Columbus, Ohio 43204

- C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District-Vinmar Village
- D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: Ohio

County/parish/borough: Delaware County

Center coordinates of site (lat/long in degree decimal format):

40.191081° N latitude and -82.903144° W longitude

Universal Transverse Mercator:

Name of nearest waterbody: Hoover Reservoir

Identify (estimate) amount of waters in the review area:

Non-wetland waters: Two streams

Cowardin Class: Riverine

Stream Flow: Stream 1: 1,085 linear feet ephemeral, Stream 2: 1,155

linear feet intermittent

Wetlands: Wetland 1 – 0.08 acres, Wetland 2 – 0.07 acre, Wetland 3 –

0.43 acres

Cowardin Class: Wetland 1- PEM, Wetland 2- PFO, Wetland 3- PFO/PUB

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: N/A

Non-Tidal: None

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination.	Date
☐ Field Determination. Date(s)):

- 1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.
- 2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions: (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD

will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply

- checked items should be included in case file and, where checked and requested, appropriately reference sources below):

 ✓ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Vinmar Village Wetland and Waterbody Delineation Report dated June 2017 and prepared by Stantec Consulting Services Inc. ✓ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report. Appendix B of Vinmar Village Wetland and Waterbody Delineation Report dated June 2017
and prepared by Stantec Consulting Services Inc. Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
Corps navigable waters' study:
 U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps – U.S. Geological Survey map(s). Cite scale & quad name: Figure 1 in Appendix A of <i>Vinmar Village Wetland and Waterbody Delineation Report</i> dated June 2017 and prepared by Stantec Consulting Services Inc. Source: USGS Delaware, Ohio 7.5 minute series topographic map USDA Natural Resources Conservation Service Soil Survey. Citation:
Figure 2 in Appendix A. Source: <i>Delaware County, Ohio Soil Survey</i>
National wetlands inventory map(s). Cite name: Figure 3 in Appendix A of <i>Vinmar Village Wetland and Waterbody Delineation Report</i> dated June 2017
and prepared by Stantec Consulting Services Inc. Source: USFWS National
Wetlands Inventory Map State/Local wetland inventory map(s):
FEMA/FIRM maps —Panel 259 of 295, Map Number 39041C0259K,

∐ 100-year Floodplain E	levation is: See attached maps (National Geodectic
Vertical Datum of 1929)	
	al (Name & Date): Photographs in Appendix C,
Aerial maps in Appendi	x A Figures 2-4 in Vinmar Village Wetland and
Waterbody Delineation F	Report dated June 2017 and prepared by Stantec
Consulting Services Inc.	toper dated care 2017 and prepared by Stantee
Other (Name & Date):	
☐ Previous determination	n(s). File no. and date of response letter:
Other information (plea	
IMPORTANT NOTE: The	information recorded on this form has not
necessarily been verified b	by the Corps and should not be relied upon for
later jurisdictional determin	nations.
	The Man of the
Signature and date of	Cianatura and data of
Signature and date of	Signature and date of
Signature and date of Regulatory Project Manager (REQUIRED)	Signature and date of person requesting preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

Table 1
Aquatic Resources at Review Site

Site number & Stream or Wetland name	Latitude	Longitude	Flow Regime or Cowardin Class	Estimated Length and/or acreage of aquatic resource in review area	Class of Aquatic Resource	Other Pertinent Information
Wetland 1	40.189303	-82.897919	PEM	0.08 ac	Non-section 10; non-tidal	Category 1 Wetland (ORAM Score 8)
Wetland 2	40.192291	-82.902577	PFO	0.07 ac	Non-section 10; non-tidal	Category 1 Wetland (ORAM Score 26)
Wetland 3	40.191017	-82.901379	PFO/PUB	0.22/ 0.21 ac	Non-section 10; non-tidal	Category 2 Wetland (ORAM Score 45)
Stream 1	40.190604	-82.904353	Ephemeral	1,085	Non-section 10; non- wetland; non- tidal	Class I PHWH (HHEI Scores 36)
Stream 2	40.189818	-82.904816	Intermittent	1,155	Non-section 10; non- wetland; non- tidal	Class II PHWH (HHEI Scores 46)