



April 1, 2019

PEA Project No: 2019-065

**Genisys Credit Union**

Mr. Thomas Alter, Research Consultant  
2100 Executive Hills Drive  
Auburn Hills, Michigan 48326

**Re: Wetland Delineation (15-23-300-041)  
Genisys Credit Union  
Part of the SW ¼ of Section 23, T.03N., R. 11E.  
City of Rochester Hills, Oakland County, Michigan**

On March 18, 2019, PEA, Inc. evaluated the subject property for the field indicators of the presence of wetlands as defined by the State of Michigan. Pink wetland survey ribbons were used to delineate a wetland boundary on the site when all three wetland indicators were present (wetland hydrology, hydric soils, and hydrophytic vegetation) as defined by USACE wetland delineation manual (1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0).

The site consisted of approximately 1.74 acres of land located just east of Rochester Road and south of Eddington Boulevard. The site is higher along Eddington Blvd and slopes south to the southern property line. There is a thirteen-foot elevation drop across the property. The Honeywell ditch runs west to east just south of the site and contains the delineated wetland. The property has been cleared historically based upon a lot of new scrub-shrub growth. Portions of the eastern property (within easement) appear to have been graded/ disturbed for stormwater utility installations. Almost all of the subject property contained upland vegetation species. One (1) wetland was found on the property. The following report summarizes the characteristics of the wetland on the property as it appeared at the time of the delineation.

**Wetland 'A'- Flags A-1 to A-12**

A majority of Wetland A is located off-site and south of the subject property. However, the northwest tip of the wetland does exist on the subject property. The portion of wetland on the subject property is 232 square feet in size. It contained wetland vegetation including reed canary grass (*Phalaris arundinacea*), cottonwood (*Populus deltoides*), willow (*Salix* spp.) and common buckthorn (*Rhamnus cathartica*). The wetland contained numerous indicators of hydrology including water stained leaves, water marks, saturation, and inundation visible on aerial imagery. The wetland contained the hydric soil indicator (A12) Thick Dark Surface. Upland species including Norway maple and upland grasses were found along the wetland boundary. The wetland boundary was found where the hydrology indicators were no longer present and the vegetation switches to primarily upland species.

*Wetland 'A'*



Southwest View from Property of Honeywell Ditch



Southeast view of Honeywell Ditch from Subject Property

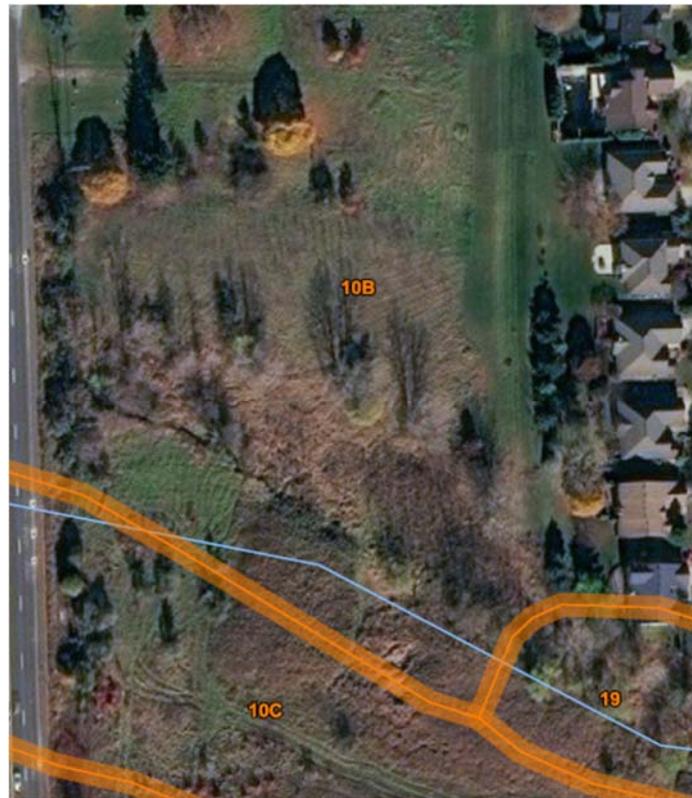


View from Honeywell Ditch – Looking North



View from Subject Property – Looking South

**NRCS Web Soil Survey Map**



USDA Soil Map: Site contains a dominance of 10B Marlette sandy loam, 1 to 6 percent slopes.

**Michigan Department of Environmental Quality Wetlands Map viewer**





### **Michigan Department of Environmental Quality Wetland Regulations**

Wetlands within 500' of an inland lake, pond, river, or stream, as defined by Part 303 of the Wetlands Protection Act are considered a regulated wetland.

Wetlands that are not within 500' of an inland lake, pond, river or stream, but are more than 5 acres in size are considered regulated wetlands.

The MDEQ reserves the right to regulate wetlands less than 5 acres in size and more than 500 feet from an inland lake, pond, river, or stream if the MDEQ has determined that these wetlands are essential to the preservation of the State's natural resources.

The MDEQ requires that any wetland alterations that total over 1/3 of an acre in size must be mitigated. The MDEQ can also require mitigation of smaller areas of disturbance, if they believe the wetland to be of high environmental significance for habitat or water quality. The preference of the MDEQ is that wetland mitigation takes place on the project property.

### **Opinion of Regulatory Status**

Many factors influence the extent of a wetland boundary, including weather patterns, drainage, changes in vegetation, and activities on the site or on adjacent properties at the time of the investigation. The wetland observations completed by PEA for the subject parcel are based on the conditions at the site at the time of our investigation and current policy regarding the procedures used to delineate wetlands.

Please be advised that the MDEQ, U.S. Army Corps of Engineers, and the U.S. Environmental Protection Agency regulate wetlands and ultimately reserve final judgement on the extent of wetlands on any given site. The determination of a wetland on a specific site can vary depending on the conditions offered above as well as on the agency representative conducting the determination, and current wetland regulations.

The following regulatory status of the wetlands is the opinion of PEA, Inc. based on the field conditions at the time of the wetland delineation of March 18, 2019.

### **Wetland A\*: Regulated due to direct connection with a stream/ drain.**

*\*Opinion of Regulatory Status for Local Municipality: Wetland A will also be regulated by the City of Rochester Hills pursuant to Article IV: Wetland and Watercourse Protection. In addition, a Natural Features setback of 25 feet will also be imposed along the wetland boundary (Zoning - Article 9: Natural Features). Use permits will be needed for both the wetland and natural feature setback for any proposed activity within those areas.*

Prepared by:

**PEA, Inc.**



Theresa Pardington, PLA, PWS, ISA-CA  
Senior Landscape Architect | Wetland Scientist

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: 2019-065 Genisys Credit Union City/County: Rochester/ Oakland Sampling Date: 3/18/19  
 Applicant/Owner: Thomas Alter State: MI Sampling Point: Wetland A  
 Investigator(s): T. Pardington Section, Township, Range: 03N11E23  
 Landform (hillslope, terrace, etc.): Sloping Local relief (concave, convex, none): None  
 Slope (%): 1-6 Lat: 42.65687 Long: -83.13205 Datum: \_\_\_\_\_  
 Soil Map Unit Name: 10B—Marlette sandy loam, 1 to 6 percent slopes NWI or WWI classification: NA

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

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

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

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: <u>30' R</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Populus deltoides</u>	30	Y	FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Acer negundo</u>	5	N	FAC	
3. _____				
4. _____				
5. _____				
<u>35</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = <u>0</u> FACW species _____ x 2 = <u>0</u> FAC species _____ x 3 = <u>0</u> FACU species _____ x 4 = <u>0</u> UPL species _____ x 5 = <u>0</u> Column Totals: _____ (A) <u>0</u> (B)  Prevalence Index = B/A = <u>0</u>
Sapling/Shrub Stratum	(Plot size: <u>15' R</u> )			
1. <u>Rhamnus cathartica</u>	20	Y	FAC	
2. _____				
3. _____				
4. _____				
5. _____				
<u>20</u> = Total Cover				
Herb Stratum	(Plot size: <u>5' R</u> )			
1. <u>Phalaris arundinacea</u>	90	Y	FACW	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Lindera benzoin</u>	5	N	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>95</u> = Total Cover				
Woody Vine Stratum	(Plot size: <u>5' R</u> )			
1. <u>NA</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. _____				
_____ = Total Cover				

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



**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: 2019-065 Genisys Credit Union      City/County: Rochester/ Oakland      Sampling Date: 3/18/19  
 Applicant/Owner: Thomas Alter      State: MI      Sampling Point: Upland A  
 Investigator(s): T. Pardington      Section, Township, Range: 03N11E23  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): 1-6      Lat: 42.65726      Long: -83.13228      Datum: \_\_\_\_\_  
 Soil Map Unit Name: 10B—Marlette sandy loam, 1 to 6 percent slopes      NWI or WWI classification: \_\_\_\_\_

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

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

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

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: <u>30' R</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Malus spp.</u>	5	Y	UPL	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
<u>5</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____      Multiply by: _____ OBL species _____ x 1 = <u>0</u> FACW species _____ x 2 = <u>0</u> FAC species _____ x 3 = <u>0</u> FACU species _____ x 4 = <u>0</u> UPL species _____ x 5 = <u>0</u> Column Totals: _____ (A) <u>0</u> (B)  Prevalence Index = B/A = <u>0</u>
Sapling/Shrub Stratum				
(Plot size: <u>15' R</u> )				
1. <u>Rhamnus cathartica</u>	30	N	FAC	
2. <u>Pyrus callyerana</u>	50	Y	UPL	
3. _____				
4. _____				
5. _____				
<u>80</u> = Total Cover				
Herb Stratum				
(Plot size: <u>5' R</u> )				
1. <u>Echinochloa crus-galli</u>	40	Y	FAC	
2. <u>Poa spp.</u>	60	Y	FACU	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum				
(Plot size: <u>5' R</u> )				
1. <u>NA</u>				
2. _____				
_____ = Total Cover				

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ Dominance Test is >50%  
 \_\_\_ Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?**      Yes \_\_\_\_\_      No

Remarks: (Include photo numbers here or on a separate sheet.)  
  
 Other trees within upland are were Norway maple, Cottonwood, Tree of Heaven and columnar oaks.

