



Assessment • Remediation • Compliance
Restoration • Incentives

10448 Citation Drive, Suite 100
Brighton, MI 48116

800 395-ASTI
Fax: 810.225.3800

www.asti-env.com

Sent Via Email Only

July 12, 2024

Mike Bylen
Bylen Golf, Inc.
3600 Pine Trace Blvd.
Rochester Hills, MI 48309

*RE: Wetland Delineation and Jurisdictional Assessment and
Quality Assessment
Pine Trace Golf Club Project Area
(Sidwell Nos. 15-31-400-016 and -017, and a Portion of -015)
3600 Pine Trace Blvd, Rochester Hills, MI
ASTI File No. A24-0777.00*

Dear Mr. Bylen:

On July 2, 2024, ASTI Environmental (ASTI) conducted a site investigation to delineate wetland boundaries on approximately 10 acres of land at the above-referenced project area in Rochester Hills, Oakland County, Michigan ("Project Area"). One wetland regulated by the City of Rochester Hills (City) and likely regulated by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) and one wetland not regulated by the City and not likely regulated by EGLE were found within the Project Area (Figure 1 – *GPS-Surveyed Wetland Boundaries*). Wetland boundaries, as depicted on Figure 1, were located using a professional grade, hand-held Global Positioning System unit (GPS).

SUPPORTING DATA AND MAPPING

The USDA Web Soil Survey (WSS), the National Wetland Inventory Map (NWI), EGLE Wetlands Map Viewer web site, and digital aerial photographs were all used to support the wetland delineation and subsequent regulatory status determination. The NWI and EGLE maps indicated the presence of wetland in the central and southern portions of the Project Area, respectively.



The WSS indicates the Project Area is comprised of the soil complexes shown in Table 1 below:

Table 1 – Project Area Soils

| Project Area Soil Complexes | Hydric Soil per the WSS (Yes or No) |
|--|-------------------------------------|
| Spinks loamy sand (0-6% slopes) | No |
| Wasepi sandy loam (0-3% slopes) | No |
| Kibbe fine sandy loam (0-4% slopes) | No |
| Thetford loamy fine sand (0-3% slopes) | No |
| Granby loamy sand | Yes |
| Riddles sandy loam (1-6% slopes) | No |

FINDINGS

ASTI investigated the Project Area for the presence of any lakes, ponds, wetlands, and watercourses. This work is based on *MCL 324 Part 301 (Inland Lakes and Streams)* and *Part 303 (Wetland Protection) and Rochester Hills Ordinance Article IV-Wetland and Watercourse Protection*.

The delineation protocol used by ASTI for this delineation is based on the US Army Corps of Engineers' *Wetland Delineation Manual, 1987*, the *Regional Supplement to the Corps of Engineer Wetland Delineation Manual: Midwest Region*, and related guidance/documents, as appropriate. Wetland vegetation, hydrology, and soils were used to locate the wetland boundaries.

Two wetlands were found within the Project Area, as discussed below.

Wetland A

Wetland A is a forested and open water/emergent wetland located in the southwestern portion of the Project Area (Figure 1). Wetland A is 0.40 acres and is entirely contained within the Project Area. Vegetation within the forested portion of Wetland A was dominated by silver maple (*Acer saccharinum*), red maple (*Acer rubrum*), and swamp white oak (*Quercus bicolor*); the remainder of Wetland A was open water. Soils within Wetland A were comprised of sandy loams and are considered hydric because the criteria for a sandy redox matrix was met. Indicators of wetland hydrology observed within Wetland A included oxidized rhizospheres on living roots.

Dominant vegetation observed within the upland adjacent to Wetland A included Kentucky blue grass (*Poa pratensis*), glossy buckthorn (*Frangula alnus*), and Asian bittersweet (*Celastrus orbiculatus*). Upland soils were sandy, and no evidence of wetland hydrology was observed.

It is ASTI's opinion that Wetland A is not regulated by the City and not likely regulated by EGLE because it is less than two acres in size and is not within 500 feet of, or directly connected to, and inland lake or stream as defined under Part 301 and Article IV.

Wetland B

Wetland B is an emergent wetland located in the northcentral portion of the Project Area (Figure 1). Wetland B is 0.04 acres on-site and extends outside the Project Area to the north. Vegetation within Wetland B was dominated by narrow-leaved cattail (*Typha angustifolia*). Soils within Wetland B were comprised of sandy loams and are considered hydric because the criteria for a sandy redox matrix was met. Indicators of wetland hydrology observed within Wetland B included oxidized rhizospheres on living roots and saturated soils.

Dominant vegetation observed within the upland adjacent to Wetland B included Kentucky blue grass and juniper (*Juniperus communis*). Upland soils were comprised of sandy loams, and no evidence of wetland hydrology was observed.

It is ASTI's opinion that Wetland B is regulated by the City and likely EGLE because it is directly connected to an unnamed watercourse outside the Project Area to the north; this watercourse exhibited defined channel bed and banks and was flowing on the day of the site inspection and, thus, meets the definition of a regulated stream under Part 301 and Article IV.

Wetland Quality Assessments

Wetland A

Wetland A is a forested and open water/emergent wetland. The forested portion's tree layer was dominated by the common native species of silver maple, red maple, and swamp white oak, generally 20-40 years in age. The shrub layer was sparse and was dominated by the invasive species of glossy buckthorn. The herbaceous layer was sparse to thick and was dominated by the common native species of path rush (*Juncus tenuis*), woodland sedge (*Carex blanda*), and fowl manna grass (*Glyceria striata*), all of which comprised approximately 75% of the total species within the herbaceous layer. Reed canary grass, a non-native species, comprised the remainder of the herbaceous layer. The primary wetland hydrology indicator of oxidized rhizospheres on living roots, was observed throughout Wetland A. The open water portion of Wetland A appears to be in direct contact with groundwater. The open water portion appears to be a man-made pond constructed in the early 1960s per ASTI's review of historical aerial photography. As such, the open water portion of Wetland A likely detains small amounts of seasonal localized surface water runoff; it also likely provides some water filtration benefits, but due to its small size, these benefits are likely minimal. Soils within Wetland A were comprised of sandy loams and generally appeared to be in a natural state.

Wetland A is situated within a residential yard, which is near South Boulevard and Pine Trace Boulevard. Residential developments and the Pine Trace Golf Course surround Wetland A; this urban setting could likely cause noise disruptions to wildlife. Consequently, Wetland A likely supports only small wildlife and birds common to suburban backyards. Based on these factors, it is ASTI's opinion that although Wetland A is dominated by common native species, it is very small and does not offer significant benefits to the City. Therefore, it is ASTI's opinion that Wetland A should be considered a low-quality natural resource to the City.

Wetland B

Wetland B is an emergent wetland almost exclusively comprised of the non-native species of narrow-leaved cattail (90%). The common native species of jewelweed (*Impatiens capensis*) comprised the remaining approximate 10% of vegetative coverage; trees and shrubs were absent. Primary wetland hydrology indicators, such as saturated soils and oxidized rhizospheres on living roots, were observed throughout Wetland B. Wetland B is directly connected to an unnamed stream to the north of the Project Area. ASTI observed storm water flows from the developed portion of the Pine Trace Golf Club draining directly into Wetland B, which indicates Wetland B provides direct water detainment and filtration to water entering the unnamed watercourse. However, due to the small size of Wetland B (approximately 0.5 acres including its extent outside the Project Area), these benefits are likely minimal. Soils within Wetland B were comprised of sandy loams and appeared to be in a natural state.

Wetland B is a portion of a larger riparian wetland system associated with the unnamed watercourse within the Rouge River watershed and, therefore, is in contact with other wetlands and watercourses along its route that are a part of the City's natural drainage system. However, Wetland B is small and surrounded by the Pine Trace site and appears to be the result of stormwater drainage from the golf course and, thus, does not hold the potential for significant wildlife habitat. Wetland B is also dominated by low-quality non-native species. Based on these factors, Wetland B should be considered a low-quality natural resource to the City.

Wetland Flagging

Wetland boundaries of Wetland A were marked in the field with day-glow pink and black striped flagging with the following flagging numbers:

Wetland A = A-1 through A-18

Wetland B was not flagging in the field per project guidelines as it was present on the functioning golf course. However, all Wetland B flags were located with GPS as follows:

Wetland B = B-1 through B-4

SUMMARY

Based upon the data, criteria, and evidence noted above, it is ASTI's professional opinion that the Project Area includes one wetland (Wetland B) regulated by the City of Rochester Hills under Article IV of the City's Wetland and Watercourse Protection Ordinance and by EGLE under the Natural Resources and Environmental Protection Act (1994 P.A. 451), Part 303 Wetland Protection, and one wetland (Wetland A) not regulated by the City or EGLE. However, please note that EGLE has the final authority on the extent of regulated wetlands, lakes, and streams in the State of



Michigan. Any proposed impact to the areas that ASTI has identified as regulated will require a permit from the City and EGLE, and ASTI recommends EGLE verification of wetland regulatory status of any wetlands that ASTI deems non-EGLE regulated, prior to any wetland impacts.

The City of Rochester Hills also requires a 25-foot Natural Features Setback be shown on site plans around City-regulated wetlands. Additionally, all trees six inches in diameter at breast height (dbh) be shown on site plans submitted to the City, which will be applicable to portions of the Project Area.

Attached are Figure 1, which shows the GPS-surveyed locations of wetland flagging on the Project Area and completed US Army Corps of Engineers (ACOE) Wetland Data Forms. Please note that the data sheet numbers match the data collection sampling points shown on Figure 1.

Thank you for the opportunity to assist you with this project. Please let us know if we can be of any further assistance in moving your project forward.

Respectfully submitted,

ASTI ENVIRONMENTAL

Kyle Hottinger
Wetland Ecologist
Professional Wetland Scientist #2927

Dianne Martin
Director of Ecological Services
Professional Wetland Scientist #1313

Attachments: Figure 1 – *GPS-Surveyed Wetland Boundaries*
 Completed ACOE Wetland Data Forms



U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
 See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Pine Trace Golf Course Project Area City/County: Rochester Hills-OaklandCo. Sampling Date: 7-2-24
 Applicant/Owner: Bylen Golf, Inc. State: MI Sampling Point: UP1
 Investigator(s): ASTI-KAH Section, Township, Range: Sec 31 T3N R11E
 Landform (hillside, terrace, etc.): plain Local relief (concave, convex, none): flat
 Slope (%): 1-3 Lat: 42.622169 Long: -83.199324 Datum: NAD83
 Soil Map Unit Name: Kibbe fine sandy loam (0-4% slopes) NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Upland adjacent to the western portion of Wetland A. | |

VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------|------------------|--|
| 1. <u>Quercus macrocarpa</u> | <u>20</u> | Yes | FAC | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| | <u>20</u> | =Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | |
| 1. <u>Frangula alnus</u> | <u>80</u> | Yes | FACW | |
| 2. <u>Lonicera tatarica</u> | <u>10</u> | No | FACU | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| | <u>90</u> | =Total Cover | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | |
| 1. <u>Parthenocissus inserta</u> | <u>15</u> | Yes | FACU | |
| 2. <u>Frangula alnus</u> | <u>10</u> | Yes | FACW | |
| 3. <u>Lonicera tatarica</u> | <u>10</u> | Yes | FACU | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| | <u>35</u> | =Total Cover | | |
| Woody Vine Stratum (Plot size: <u>15'</u>) | | | | |
| 1. <u>Celastrus orbiculatus</u> | <u>25</u> | Yes | UPL | |
| 2. _____ | | | | |
| | <u>25</u> | =Total Cover | | |

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
 Total Number of Dominant Species Across All Strata: 6 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

| | | |
|--------------------------------------|-------------------|------------------|
| | Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>90</u> | <u>90</u> | x 2 = <u>180</u> |
| FAC species <u>20</u> | <u>20</u> | x 3 = <u>60</u> |
| FACU species <u>35</u> | <u>35</u> | x 4 = <u>140</u> |
| UPL species <u>25</u> | <u>25</u> | x 5 = <u>125</u> |
| Column Totals: <u>170</u> (A) | | <u>505</u> (B) |
| Prevalence Index = B/A = <u>2.97</u> | | |

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

| | |
|---|--|
| Remarks: (Include photo numbers here or on a separate sheet.) | Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> |
|---|--|

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
 See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Pine Trace Golf Course Project Area City/County: Rochester Hills-OaklandCo. Sampling Date: 7-2-24
 Applicant/Owner: Bylen Golf, Inc. State: MI Sampling Point: UP3
 Investigator(s): ASTI-KAH Section, Township, Range: Sec 31 T3N R11E
 Landform (hillside, terrace, etc.): slope Local relief (concave, convex, none): slope
 Slope (%): 5-7 Lat: 42.624629 Long: -83.196357 Datum: NAD83
 Soil Map Unit Name: Riddles sandy loam (1-6% slopes) NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Hydic Soil Present? Yes <u> </u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | |

Remarks:
 Upland conditions in a wooded area in the NE portion of the Project Area.

VEGETATION – Use scientific names of plants.

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B) |
|---|------------------------|-------------------|------------------|--|
| 1. <u>Tilia americana</u> | <u>60</u> | <u>Yes</u> | <u>FACU</u> | |
| 2. <u>Quercus rubra</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | |
| 3. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 4. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 5. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| | <u>70</u> =Total Cover | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>70</u> x 2 = <u>140</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>115</u> x 4 = <u>460</u> UPL species <u>40</u> x 5 = <u>200</u> Column Totals: <u>230</u> (A) <u>815</u> (B) Prevalence Index = B/A = <u>3.54</u> |
| 1. <u>Frangula alnus</u> | <u>50</u> | <u>Yes</u> | <u>FACW</u> | |
| 2. <u>Elaeagnus umbellata</u> | <u>10</u> | <u>No</u> | <u>UPL</u> | |
| 3. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 4. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 5. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| | <u>60</u> =Total Cover | | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <u>Impatiens capensis</u> | <u>20</u> | <u>Yes</u> | <u>FACW</u> | |
| 2. <u>Podophyllum peltatum</u> | <u>20</u> | <u>Yes</u> | <u>FACU</u> | |
| 3. <u>Rubus allegheniensis</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | |
| 4. <u>Symphotrichum lanceolatum</u> | <u>5</u> | <u>No</u> | <u>FAC</u> | |
| 5. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 6. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 7. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 8. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 9. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 10. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| | <u>55</u> =Total Cover | | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> |
| 1. <u>Celastrus orbiculatus</u> | <u>30</u> | <u>Yes</u> | <u>UPL</u> | |
| 2. <u>Vitis labrusca</u> | <u>15</u> | <u>Yes</u> | <u>FACU</u> | |
| | <u>45</u> =Total Cover | | | |

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

Project/Site: Pine Trace Golf Course Project Area City/County: Rochester Hills-OaklandCo. Sampling Date: 7-2-24
 Applicant/Owner: Bylen Golf, Inc. State: MI Sampling Point: UP4
 Investigator(s): ASTI-KAH Section, Township, Range: Sec 31 T3N R11E
 Landform (hillside, terrace, etc.): slope Local relief (concave, convex, none): slope
 Slope (%): 3-5 Lat: 42.624406 Long: -83.19817 Datum: NAD83
 Soil Map Unit Name: Granby loamy sand NWI classification: none
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Upland adjacent to Wetland B. | |

VEGETATION – Use scientific names of plants.

| | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|---|------------------|-------------------|------------------|---|-------------------|--------------|----------------------|----------------|-----------------------|----------------|-----------------------|-----------------|------------------------|------------------|-----------------------|------------------|-------------------------------|----------------|--------------------------------------|--|
| Tree Stratum (Plot size: <u>30'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Acer X freemanii</u> | 10 | Yes | UPL | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>16.7%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. <u>Quercus rubra</u> | 10 | Yes | FACU | | | | | | | | | | | | | | | | | |
| 3. <u>Picea pungens</u> | 5 | Yes | FACU | | | | | | | | | | | | | | | | | |
| 4. _____ | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | | | | | | | | | | | | | | | | | | | | |
| | 25 | =Total Cover | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Juniperus communis</u> | 40 | Yes | UPL | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Total % Cover of:</td> <td style="text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>50</u></td> <td>x 5 = <u>250</u></td> </tr> <tr> <td>Column Totals: <u>105</u> (A)</td> <td><u>450</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.29</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>0</u> | x 2 = <u>0</u> | FAC species <u>20</u> | x 3 = <u>60</u> | FACU species <u>35</u> | x 4 = <u>140</u> | UPL species <u>50</u> | x 5 = <u>250</u> | Column Totals: <u>105</u> (A) | <u>450</u> (B) | Prevalence Index = B/A = <u>4.29</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>0</u> | x 2 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>20</u> | x 3 = <u>60</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>35</u> | x 4 = <u>140</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>50</u> | x 5 = <u>250</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>105</u> (A) | <u>450</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>4.29</u> | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | | | | | | | | | | | | | | | | | | | | |
| | 40 | =Total Cover | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Poa pratensis</u> | 20 | Yes | FAC | Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | | | | | | | | | |
| 2. <u>Plantago lanceolata</u> | 20 | Yes | FACU | | | | | | | | | | | | | | | | | |
| 3. _____ | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | | | | | | | | | | | | | | | | | | | | |
| 8. _____ | | | | | | | | | | | | | | | | | | | | |
| 9. _____ | | | | | | | | | | | | | | | | | | | | |
| 10. _____ | | | | | | | | | | | | | | | | | | | | |
| | 40 | =Total Cover | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>15'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | 0 | | | Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> | | | | | | | | | | | | | | | | |
| 2. _____ | | | | | | | | | | | | | | | | | | | | |
| | | =Total Cover | | | | | | | | | | | | | | | | | | |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | | | | | | | | | | | | | | | | | |

Project/Site: Pine Trace Golf Course Project Area City/County: Rochester Hills-OaklandCo. Sampling Date: 7-2-24
 Applicant/Owner: Bylen Golf, Inc. State: MI Sampling Point: WT1
 Investigator(s): ASTI-KAH Section, Township, Range: Sec 31 T3N R11E
 Landform (hillside, terrace, etc.): slight depression Local relief (concave, convex, none): concave
 Slope (%): 1-3 Lat: 42.622388 Long: -83.198614 Datum: NAD83
 Soil Map Unit Name: Kibbe fine sandy loam (0-4% slopes) NWI classification: none
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>x</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Wetland A - forested portion. | |

VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|---|------------------------|-------------------|------------------|---|-------------------|--------------|-----------------------|-----------------|------------------------|------------------|-----------------------|------------------|------------------------|-----------------|-----------------------|------------------|-------------------------------|----------------|--------------------------------------|--|
| 1. <u>Acer saccharinum</u> | <u>30</u> | <u>Yes</u> | <u>FACW</u> | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.3%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. <u>Quercus bicolor</u> | <u>20</u> | <u>Yes</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Acer rubrum</u> | <u>5</u> | <u>No</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 4. <u> </u> | | | | | | | | | | | | | | | | | | | | |
| 5. <u> </u> | | | | | | | | | | | | | | | | | | | | |
| | <u>55</u> =Total Cover | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Frangula alnus</u> | <u>20</u> | <u>Yes</u> | <u>FACW</u> | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>80</u></td> <td>x 2 = <u>160</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>25</u></td> <td>x 5 = <u>125</u></td> </tr> <tr> <td>Column Totals: <u>170</u> (A)</td> <td><u>450</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.65</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>20</u> | x 1 = <u>20</u> | FACW species <u>80</u> | x 2 = <u>160</u> | FAC species <u>35</u> | x 3 = <u>105</u> | FACU species <u>10</u> | x 4 = <u>40</u> | UPL species <u>25</u> | x 5 = <u>125</u> | Column Totals: <u>170</u> (A) | <u>450</u> (B) | Prevalence Index = B/A = <u>2.65</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>20</u> | x 1 = <u>20</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>80</u> | x 2 = <u>160</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>35</u> | x 3 = <u>105</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>10</u> | x 4 = <u>40</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>25</u> | x 5 = <u>125</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>170</u> (A) | <u>450</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>2.65</u> | | | | | | | | | | | | | | | | | | | | |
| 2. <u> </u> | | | | | | | | | | | | | | | | | | | | |
| 3. <u> </u> | | | | | | | | | | | | | | | | | | | | |
| 4. <u> </u> | | | | | | | | | | | | | | | | | | | | |
| 5. <u> </u> | | | | | | | | | | | | | | | | | | | | |
| | <u>20</u> =Total Cover | | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Dactylis glomerata</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | | | | | | | | | |
| 2. <u>Juncus tenuis</u> | <u>20</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Carex blanda</u> | <u>5</u> | <u>No</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 4. <u>Apocynum cannabinum</u> | <u>5</u> | <u>No</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 5. <u>Glyceria striata</u> | <u>20</u> | <u>Yes</u> | <u>OBL</u> | | | | | | | | | | | | | | | | | |
| 6. <u>Phalaris arundinacea</u> | <u>10</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 7. <u> </u> | | | | | | | | | | | | | | | | | | | | |
| 8. <u> </u> | | | | | | | | | | | | | | | | | | | | |
| 9. <u> </u> | | | | | | | | | | | | | | | | | | | | |
| 10. <u> </u> | | | | | | | | | | | | | | | | | | | | |
| | <u>70</u> =Total Cover | | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>15'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Celastrus orbiculatus</u> | <u>25</u> | <u>Yes</u> | <u>UPL</u> | Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> | | | | | | | | | | | | | | | | |
| 2. <u> </u> | | | | | | | | | | | | | | | | | | | | |
| | <u>25</u> =Total Cover | | | | | | | | | | | | | | | | | | | |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | | | | | | | | | | | | | | | | | |

SOIL

Sampling Point: WT1

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|----|-------------------|------------------|---------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-18 | 10YR 3/1 | 90 | 10YR 6/8 | 10 | C | PL/M | Sandy | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Coast Prairie Redox (A16) | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input checked="" type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Iron-Manganese Masses (F12) | |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Mucky Mineral (F1) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> 2 cm Muck (A10) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | | |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) | <input type="checkbox"/> Redox Depressions (F8) | | |

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

| | |
|--|---|
| Restrictive Layer (if observed): Type: <u> </u> none Depth (inches): <u> </u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | |
|---|--|
| Primary Indicators (minimum of one is required; check all that apply) | Secondary Indicators (minimum of two required) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Fauna (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Gauge or Well Data (D9) |
| | <input type="checkbox"/> Other (Explain in Remarks) |
| | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

| | |
|---|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

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

Remarks:

Project/Site: Pine Trace Golf Course Project Area City/County: Rochester Hills-OaklandCo. Sampling Date: 7-2-24
 Applicant/Owner: Bylen Golf, Inc. State: MI Sampling Point: WT2
 Investigator(s): ASTI-KAH Section, Township, Range: Sec 31 T3N R11E
 Landform (hillside, terrace, etc.): slight depression Local relief (concave, convex, none): concave
 Slope (%): 1-3 Lat: 42.624668 Long: -83.198044 Datum: NAD83
 Soil Map Unit Name: Grandby loamy sand NWI classification: none
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>x</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Wetland B - emergent wetland. | |

VEGETATION – Use scientific names of plants.

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|-----------------------|---------------------------|------------------|-------------------|------------------|--|
| 1. | | 0 | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| | | | =Total Cover | | |
| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. | | 0 | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| | | | =Total Cover | | |
| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. | <u>Typha angustifolia</u> | 70 | Yes | OBL | |
| 2. | <u>Impatiens capensis</u> | 30 | Yes | FACW | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | 100 | =Total Cover | | |
| Woody Vine Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. | | | | | |
| 2. | | | | | |
| | | | =Total Cover | | |

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------------|-----------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>70</u> | x 1 = <u>70</u> |
| FACW species <u>30</u> | x 2 = <u>60</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>100</u> (A) | <u>130</u> (B) |
| Prevalence Index = B/A = <u>1.30</u> | |

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

| | |
|---|--|
| Remarks: (Include photo numbers here or on a separate sheet.) | Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> |
|---|--|

SOIL

Sampling Point: WT2

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|----|-------------------|------------------|---------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 10YR 4/2 | 90 | 10YR 6/8 | 10 | C | PL/M | Sandy | Prominent redox concentrations |
| 6-18 | 10YR 6/2 | 70 | 10YR 4/2 | 5 | C | M | Sandy | Faint redox concentrations |
| | | | 10YR 4/6 | 25 | C | PL/M | | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Coast Prairie Redox (A16) | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input checked="" type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Iron-Manganese Masses (F12) | |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Mucky Mineral (F1) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> 2 cm Muck (A10) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | | |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) | <input type="checkbox"/> Redox Depressions (F8) | | |

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

| | |
|--|---|
| Restrictive Layer (if observed): Type: <u> </u> none Depth (inches): <u> </u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | |
|---|--|
| Primary Indicators (minimum of one is required; check all that apply) | Secondary Indicators (minimum of two required) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Fauna (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Gauge or Well Data (D9) |
| | <input type="checkbox"/> Other (Explain in Remarks) |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

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

Remarks: