



**VILLAGE OF ALGONQUIN/KANE
COUNTY ISOLATED WETLAND
PERMIT & BMP PLAN SUBMITTAL**

PROJECT SITE:

The Trails of Woods Creek Subdivision Development
Algonquin, McHenry County, Illinois

PREPARED FOR:

Pulte Home Corporation
1900 E. Golf Road, Suite 300
Schaumburg, Il 60173

PREPARED BY:

V3 Companies, Ltd.
7325 Janes Avenue
Woodridge, Illinois 60517
630.724.9200

FOR PRESENTATION TO:

The Village of Algonquin

July 13, 2020



July 13, 2020

Mr. Robert Mitchard
Director of Public Works
Village of Algonquin
110 Meyer Drive
Algonquin, Illinois 60102

**RE: Village of Algonquin Wetland Permit Submittal
Proposed Trails of Woods Creek Residential Subdivision Development
Algonquin, McHenry County, Illinois**

Dear Mr. Mitchard:

This letter and the enclosed materials constitute the Wetland Permit Application required under Article VII of the Kane County/Village of Algonquin Stormwater Ordinance. The Village of Algonquin follows the Kane County Stormwater Management Ordinance (Ordinance) for the entire Village. The following wetland submittal follows the outline of the updated June 1, 2019 Kane County Stormwater Management Ordinance. This permit application is being submitted on behalf of Pulte Home Corporation (Applicant), for the proposed development of a residential development located north of Bunker Hill Road, south of Algonquin Road, east of Square Barn Road and west of Greenway View Drive in Algonquin, McHenry County, Illinois (Section 25, T43N, R7E; 41.175332°N, -88.356965 °W; Crystal Lake quadrangle). The proposed improvements include the residential homes, streets, naturalized stormwater management facilities, and the associated infrastructure for the development.

The U.S. Army Corps of Engineers (USACE) issued a jurisdictional determination letter dated April 8, 2020 (Appendix 1 of this submittal) for the site. The USACE took jurisdiction of ponds 8 and 9 (Waters of the U.S.) and determined that Areas 1 through 7 and Areas 10 through 16 are water features exempt from Federal Regulation. In addition, the Village of Algonquin concurred that Areas 1 through 7 and Areas 10 through 16 are exempt from the Village of Algonquin/Kane County Ordinance jurisdiction as documented in the May 26, 2020 email from the Village of Algonquin (Appendix 1 of this submittal). Based on this information, there are no isolated wetlands/ponds under the jurisdiction of the Village of Algonquin. The only regulated areas on the site are Areas 8 and 9 (in the southeast portion of the site) which are regulated by the U.S. Army Corps of Engineers (USACE) Chicago District as Waters of the U.S. (Exhibit A, Appendix 2 of this submittal). A permit from the USACE Chicago District has been applied for the improvements to Areas 8 and 9 on the project site, which are regulated and under the jurisdiction of the USACE. A copy of the USACE approved and issued permit will be provided to the Village of Algonquin upon receipt.

As shown on Exhibit A (Appendix 2), Areas 8 and 9 are the only areas that are regulated on the site. Areas 8 and 9 are Waters of the U.S. under the jurisdiction of the USACE. A permit has been applied for through the USACE Chicago District for the proposed improvements to Areas 8 and 9 and will be forwarded to the Village of Algonquin upon receipt.

As shown on Exhibit B in Appendix 2 of this submittal, the proposed project will result in no impacts to isolated wetlands/Waters under the jurisdiction of the Village of Algonquin. The improvements proposed to Areas 8 and 9 are being permitted through the USACE Chicago District.

Exhibit C1 (Appendix 2) is the overall proposed Best Management Practices (BMP)/ Naturalized Basin Planting Plan. 24.67 acres of native plantings (plant plugs and prairie seed) will be installed as part of the project. This will be an overall improvement to the existing turf grass that exists today and will improve water quality from overland stormwater run-off and will provide enhanced quality habitat. Exhibit C depicts the proposed naturalized plantings that will serve as BMPs for the proposed development. Exhibits C2 through C7 (Appendix 2) are detailed zoomed in exhibits of each of the BMP planting areas.

Exhibit D (Appendix 2) is the proposed BMP/Naturalized Basin Planting & Seeding lists that will be installed in the naturalized basins for the project.

SECTION 9-180. WETLAND SUBMITTAL

- a) A permit from the USACE Chicago District has been applied for as it relates to the proposed improvements to Areas 8 and 9, which are Waters of the U.S. under the jurisdiction of the USACE. A copy of the approved USACE will be provided to the Village of Algonquin upon receipt. There are no isolated wetlands/Waters on the project site; therefore, there are no isolated wetland/Waters impacts to be permitted by the Village of Algonquin or Kane County Stormwater. The attached engineering plan set and Exhibits identify the location of the surveyed Waters of the U.S. (Areas 8 and 9), the proposed impacts to the surveyed Waters of the U.S. (Areas 8 and 9- being permitted with the USACE Chicago District), and the proposed naturalized stormwater management facilities for the proposed development.
- b) This wetland submittal has been prepared in accordance with the detailed requirements of Article VII sections 9-168 through 9-180 of the Kane County Stormwater Management Ordinance as administered by the Village of Algonquin who is fully Certified to administer the Ordinance.
- c) The Illinois Department of Natural Resources (IDNR) threatened and Endangered Species sign-off dated October 4, 2019, is located in Appendix 4 of this submittal. The U.S. Fish & Wildlife Service (USFWS) Section 7 Consultation documentation is also located in Appendix 4 of this document. Neither the IDNR or USFWS threatened & endangered species reviews identify the presence of threatened and endangered species or their habitat within the proposed project footprint.
- d) The IHPA/SHPO sign off letter dated April 9, 2020 is also included in Appendix 4 of this submittal.

SECTION 9-169. REQUIREMENTS FOR WETLAND DELINEATION

The wetland delineation for the property is contained in the Wetland Delineation and Assessment Report, Revised April 15, 2020, provided in Appendix 3 of this submittal. Two Waters of the U.S. under the jurisdiction of the USACE Chicago District, as summarized below, were delineated on the property (Areas 8 and 9). No isolated wetlands/Waters are present on the site.

No wetlands were identified on the subject property. Thirteen manmade water features (Areas 1-7 & 10-16) used for golf course irrigation, and two Waters of the U.S. (Areas 8 & 9) were identified on the subject property.

Woods Creek, a Waters of the U.S., was observed off-site on the east side of Greenway View Drive, located along the eastern property boundary.

A Jurisdictional Determination dated April 8, 2020 identifies Areas 8 & 9 as Waters of the U.S. subject to USACE jurisdiction and Areas 1-7 & 10-16 as water features exempt from regulation.

V3's Wetland Delineation & Assessment Report dated April 15, 2020 (Appendix 3 of this submittal), meets all of the requirements identified in Section 9-169 of the Kane County Stormwater Management Ordinance as administered by the Village of Algonquin.

SECTIONS 9-170 through 9-174. MITIGATION

As shown on Exhibit B (Appendix 2) the proposed project will not result in any impacts to isolated wetlands/Waters under the jurisdiction of the Village of Algonquin/Kane County. Based on this information, there is no mitigation required as outlined in the Kane County Stormwater Ordinance. Impacts to Areas 8 and 9, under the jurisdiction of the USACE Chicago District, will occur. Mitigation for the impacts to jurisdictional Areas 8 and 9 will be satisfied through the USACE permitting process. A copy of the approved USACE permit for the project will be provided to the Village of Algonquin upon receipt.

The proposed native plantings within the naturalized stormwater management facilities will serve as Best Management Practices (BMP's) for the proposed development. The three-year Monitoring & Management Plan for these proposed native plantings is located in Appendix 5 of this submittal.

Exhibit C1 (Appendix 2) is the overall proposed Best Management Practices (BMP)/ Naturalized Basin Planting Plan. 24.67 acres of native plantings (plant plugs and prairie seed) will be installed as part of the project. This will be an overall improvement to the existing turf grass that exists today and will improve water quality from overland stormwater run-off and will provide enhanced quality habitat. Exhibit C depicts the proposed naturalized plantings that will serve as BMPs for the proposed development. Exhibits C2 through C7 (Appendix 2) are detailed zoomed in exhibits of each of the BMP planting areas.

Exhibit D (attached) is the proposed BMP/Naturalized Basin Planting & Seeding lists that will be installed in the naturalized basins on the site.

SECTION 9-177. BUFFER REQUIREMENTS

The buffers associated with Areas 8 and 9 that are under the jurisdiction of the USACE Chicago District are 50 feet. These are the required buffers per the USACE regulations. A permit for proposed improvements to Areas 8 and 9 and their associated buffers has been applied for. Upon receipt, the approved USACE permit will be provided to the Village of Algonquin for their records.

If you have any questions, please do not hesitate to contact me at (630) 729-6325.

Sincerely,
V3 Companies, Ltd.

A handwritten signature in black ink that reads "Scott J. Brejcha". The signature is written in a cursive style and is contained within a thin black rectangular border.

Scott J. Brejcha, PWS
Wetland Consulting Group Leader
Natural Resources Division
Kane County Qualified Wetland Review Specialist #W-069

SJB/sg

Enclosures

cc: V3 File

APPENDIX 1

USACE JURISDICTIONAL DETERMINATION
LETTER DATED
APRIL 8, 2020

VILLAGE OF ALGONQUIN MAY 26, 2020 EXEMPTION
CONCURRENCE EMAIL



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
CHICAGO DISTRICT, CORPS OF ENGINEERS
231 SOUTH LASALLE STREET
CHICAGO, ILLINOIS 60604-1437

April 8, 2020

Operations Division
Regulatory Branch
LRC-2019-00861

SUBJECT: Jurisdictional Determination for the 137 Acre Terrace Hill Golf Course Project
Located in Algonquin, McHenry County, Illinois (Latitude 42.172182, Longitude -88.359735)

Charles Zange
P.O. Box 7777
Algonquin, Illinois 60102

Dear Mr. Zange:

This is in response to your request that the U.S. Army Corps of Engineers complete a jurisdictional determination for the above-referenced site submitted on your behalf by V3 Companies. The subject project has been assigned number LRC-2019-00861. Please reference this number in all future correspondence concerning this project.

Following a review of the information you submitted, this office has determined that the subject property contains "waters of the United States".

Areas 8 & 9 have been determined to be under the jurisdiction of this office and therefore, subject to Federal regulation.

Areas 1-7 & 10-16 are water features Exempt from Federal regulation. Please be informed that this office does not concur with the boundaries of waters not subject to Federal regulation.

In the event an application is submitted for work within jurisdictional areas, a concurrence of the wetland boundaries and/or a professional survey of the identified wetland and water features stamped by a professional surveyor will need to be prepared and shall accompany the approved wetland delineation.

For a detailed description of our determination please refer to the enclosed decision document. This determination covers only your project as depicted in the Wetland Delineation Report dated October 2, 2019, prepared by V3 Companies.

This determination is valid for a period of five (5) years from the date of the letter, unless new information warrants revision of the determination before the expiration date or a District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

This letter is considered an approved jurisdictional determination for your subject site. If you object to this determination, you may appeal, according to 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and a Request for Appeal (RFA) form. If you request to appeal the above determination, you must submit a completed RFA form to the Great Lakes/Ohio River Division Office at the following address:

Jacob Siegrist
Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10-714
Cincinnati, Ohio 45202-3222
Phone: (513) 684-2699 Fax: (513) 684-2460

In order to be accepted, your RFA must be complete, meet the criteria for appeal and be received by the Division Office within sixty (60) days of the date of the NAP. If you concur with the determination in this letter, submittal of the RFA form to the Division office is not necessary.

This determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

It is your responsibility to obtain any required state, county, or local approvals for impacts to wetland areas not under the Department of the Army jurisdiction. Please note that the McHenry County Ordinance regulates isolated waters of McHenry County that are not under the jurisdiction of the U.S. Army Corps of Commanders. For projects in incorporated areas of McHenry County, contact the certified community for information related to the ordinance. For projects in unincorporated areas of McHenry County, contact the McHenry County Department of Planning and Development at (815) 334-4560.

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers regulates the discharge of dredged or fill material into waters of the United States, including wetlands. A Department of the Army permit is required for any proposed work involving the discharge of dredged or fill material within the jurisdiction of this office. To initiate the permit process, please submit a joint permit application form along with detailed plans of the proposed work. Information concerning our program, including the application form and an application checklist, can be found at and downloaded from our website:

<http://www.lrc.usace.army.mil/Missions/Regulatory.aspx>

If you have any questions, please contact Mr. Michael J. Machalek of my staff by telephone at (312) 846-5534 or email at Mike.J.Machalek@usace.army.mil.

Sincerely,

Diedra L. McLaurin
Team Leader, West Section
Regulatory Branch

Enclosures

Copy Furnished w/out Enclosures

McHenry County Department of Planning and Development (Joanna Colletti)
V3 Companies (Scott Brejcha)

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

Applicant: Charles Zange

File Number: LRC-2019-00861

Date: April 8, 2020

Attached is:

See Section below

	INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A. INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit or a Letter of Permission (LOP), you may sign the permit document and return it to the district commander for final authorization. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district commander. Your objections must be received by the district commander within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district commander will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district commander will send you a proffered permit for your reconsideration, as indicated in Section B below.

B. PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit or a Letter of Permission (LOP), you may sign the permit document and return it to the district commander for final authorization. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

C. PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

D. APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

E. PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Regulatory Branch
Chicago District Corps of Engineers
231 South LaSalle Street, Suite 1500
Chicago, IL 60604-1437
Phone: (312) 846-5530
Fax: (312) 353-4110

If you only have questions regarding the appeal process you may also contact:

Jacob Siegrist
Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10524
Cincinnati, Ohio 45202-3222
Phone: (513) 684-2699 Fax: (513) 684-2460

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Commanders personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): April 7, 2020

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Chicago District, Terrace Hill Golf Course, LRC-2019-861

C. PROJECT LOCATION AND BACKGROUND INFORMATION: 4015 West Algonquin Road
State: Illinois County/parish/borough: **McHenry** City: Algonquin
Center coordinates of site (lat/long in degree decimal format): Lat. 42.172182°N, Long. -88.359735° W.
Universal Transverse Mercator: Zone 16

Name of nearest waterbody: Woods Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Fox River**

Name of watershed or Hydrologic Unit Code (HUC): **Upper Fox (07120006)**

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

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

Office (Desk) Determination. Date: April 7, 2020

Field Determination. Date(s): March 31, 2020

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

2. Non-regulated waters/wetlands (check if applicable):¹

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: **Several small golf course ponds constructed for aesthetic reasons and for watering of golf course.**

SECTION III: CWA ANALYSIS

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

Other: (explain, if not covered above): .

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall 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: Wetland Delineation Report dated October 2, 2019, prepared by V3 Companies.

Data sheets prepared/submitted by or on behalf of the applicant/consultant.

Office concurs with data sheets/delineation report.

Office does not concur with data sheets/delineation report.

Data sheets prepared by the Corps: .

Corps navigable waters' study: .

¹ Supporting documentation is presented in Section III.F.

- U.S. Geological Survey Hydrologic Atlas:Crystal Lake HA 253, 1967,
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Crystal Lake 7.5", 1992, Pick List, Pick List, .
- USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey of McHenry County, Illinois (1965).
- National wetlands inventory map(s). Cite name: Crystal Lake, .
- State/Local wetland inventory map(s): McHenry County ADID, Pick List, .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): .
 - or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: Site visit to walk property to view all water bodies.

- Areas are ditches (check all that apply):
 - Non-tidal drainage and irrigation ditches excavated on dry land (51 FR 41217, Nov. 13, 1986).
 - Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water (USACE JD Form Instructional Guidebook 5/30/2007). Area 16.
 - Ditches that do not have a relatively permanent flow into waters of the U.S. or between two (or more) waters of the U.S. (USACE JD Form Instructional Guidebook 5/30/2007).
- Area(s) are artificial waters created in upland or dry land:
 - Artificially irrigated areas which would revert to upland if the irrigation ceased (51 FR 41217, Nov. 13, 1986).
 - Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing (51 FR 41217, Nov. 13, 1986).
 - Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons (51 FR 41217, Nov. 13, 1986). Areas 1-7 and Areas 10-15.
 - Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States (51 FR 41217, Nov. 13, 1986).
 - Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet criteria of this definition) (33 CFR 328.3 (a)).
- Area(s) are swales (USACE JD Form Instructional Guidebook 5/30/2007).
- Area(s) are erosional features (including gullies) (USACE JD Form Instructional Guidebook 5/30/2007).
- Area(s) are prior converted cropland (33 CFR 328.3(a)(8)).
- Area(s) are uplands.
- Other:

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

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State: Illinois County/parish/borough: **McHenry** City: Algonquin
Center coordinates of site (lat/long in degree decimal format): Lat. 42.172182°N, Long. -88.359735° W.
Universal Transverse Mercator: Zone 16

Name of nearest waterbody: Woods Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Fox River**

Name of watershed or Hydrologic Unit Code (HUC): **Upper Fox (07120006)**

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

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

Office (Desk) Determination. Date: April 7, 2020

Field Determination. Date(s): March 31, 2020

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain: Defined in People of State of Ill. ex rel. Scott v. Hoffman, No. P-CIV-76-45, slip op. at 7 (S.D.Ill. Jan. 20, 1979).

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs

Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: 0.59 acres.

c. Limits (boundaries) of jurisdiction based on: **Established by OHWM.**

Elevation of established OHWM (if known): .

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: **Pick List.**

Summarize rationale supporting determination: As defined in People of State of Ill. ex rel. Scott v. Hoffman, No. P-CIV-76-45, slip op. at 7 (S.D.Ill. Jan. 20, 1979).

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": .

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:

- TNWs: linear feet width (ft), Or, acres.
- Wetlands adjacent to TNWs: acres.

2. RPWs that flow directly or indirectly into TNWs.

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Partially piped, and partially day-lighted tributary had strong flowing water during visit in October, and again in March..
- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 - Other non-wetland waters: acres.
- Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Areas 8 & 9 are bisected by the tributary of Woods Creek.**
 - Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: **0.59** acres.


SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall 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: Wetland Delineation and Assessment Report dated October 2, 2019, prepared by V3 Companies.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - 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:Crystal Lake HA 253, 1967, .
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Crystal Lake 7.5", 1992, Pick List, Pick List, .
- USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey of McHenry County, Illinois (1965).
- National wetlands inventory map(s). Cite name: Crystal Lake, .
- State/Local wetland inventory map(s): McHenry County ADID, Pick List, .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): .
or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: People of State of Ill. ex rel. Scott v. Hoffman, No. P-CIV-76-45, (S.D.Ill. Jan. 20, 1979)
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: Sites 8 & 9 were observed 6 months apart, and are part of a mapped tributary system, and exhibited RPW flow on both visits.



 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p> <p>Visio, Vertere, Virtute... "The Vision To Transform With Excellence"</p>	PROJECT NO.: 19381 CREATED BY: AMM DATE: 09/26/2019 SCALE: See Scale Bar	CLIENT: Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173 BASE LAYER: DigitalGlobe Aerial Imagery (2017)	TITLE: WETLAND DELINEATION MAP Terrace Hill Algonquin, Illinois	FIGURE: 9
	<small>N:\2019\19381\Drawings\ArcGIS\NR\Wetland\FIG9delin19381.mxd</small>			

From: [Michele Zimmerman](#)
To: [Scott Brejcha](#)
Cc: "pbourke@cbbel.com"; Robert Mitchard; "Michael Kerr"
Subject: RE: Pulte Development- Woods Creek
Date: Tuesday, May 26, 2020 1:56:34 PM

CAUTION: This email originated from outside of V3. Do not click links or open attachments unless you trust the sender.

Hi Scott,

The Village agrees with the conclusion below that Areas 1 – 7 and 10-16 are exempt water features and not regulated under the Kane Co. Stormwater Ordinance.

Michele Zimmerman

Michele Zimmerman
Assistant Public Works Director
Village of Algonquin

From: Robert Mitchard
Sent: Wednesday, May 20, 2020 1:06 PM
To: Michele Zimmerman <mzimmerman@algonquin.org>; 'Mike Kerr (mkerr@cbbel.com)' <mkerr@cbbel.com>
Cc: 'pbourke@cbbel.com' <pbourke@cbbel.com>
Subject: FW: Pulte Development- Woods Creek

Please provide the requested input... Thanks.

From: Scott Brejcha <sbrejcha@v3co.com>
Sent: Wednesday, May 20, 2020 11:10 AM
To: Robert Mitchard <bobmitchard@algonquin.org>
Cc: Ty Morris <Ty.Morris@PulteGroup.com>; Rob Getz (Robert.Getz@PulteGroup.com) <Robert.Getz@PulteGroup.com>; Matt Brolley <Matt.Brolley@PulteGroup.com>
Subject: Pulte Development- Woods Creek

Good Morning Mr. Mitchard,

I have attached to this email the U.S. Army Corps of Engineers' jurisdictional determination for the proposed Woods Creek development in Algonquin. The Federal authority of the Corps has taken jurisdiction of Areas 8 and 9 on the attached map. They have exempted the other ponds (Areas 1 through 7 and Areas 10 through 16). With the Village being a fully certified community and

administering the Kane County Ordinance for all parts of Algonquin, I would like to ask for the Villages concurrence that ponds 1 through 7 and ponds 10 through 16 are exempt water features and not regulated under the Kane County Ordinance. These ponds were man-made.

To have this verified by the Village will finalize the path for future permitting.

Could you please provide an email or letter from the Village or the Villages wetland consultant regarding ponds 1 through 7 and ponds 10 through 16 so that we are all on the same page moving forward?

Thank you!
Scott

Scott J. Brejcha, PWS | Wetland Consulting Group Leader

V3 Companies | 7325 Janes Avenue | Woodridge, IL 60517

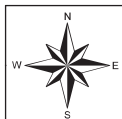
P 630.729.6325 | **C** 630.675.8584 | **E** Sbrejcha@v3co.com

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APPENDIX 2
EXHIBITS



LEGEND	
	WATERS OF THE U.S. LIMITS (USACE JURISDICTION)
	50' WATERS OF THE U.S. BUFFER LIMITS
	SITE BOUNDARY


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REVISIONS		
NO.	DATE	DESCRIPTION

BASE LAYER:
 KANE COUNTY
 ORTHOIMAGERY
 (2019)

SEAL:
 PROJECT NO.: 19381
 FILE NAME: excond
 DATE: 7/10/2020
 SCALE: 1" = 200'
 DESIGNED BY: AMM
 DRAWN BY: AMM
 CHECKED BY: SJB
 PROJECT MANAGER: SJB

**THE TRAILS OF
 WOODS CREEK**
 ALGONQUIN ILLINOIS

**EXISTING WATERS OF THE U.S.
 AND BUFFER CONDITIONS**

EXHIBIT
A

N:\2019\19381\Drawings\ArcGIS\Wetland\Permit\EX\excond_22x34_19381.mxd



LEGEND	
	Waters of the U.S. Impacts (0.62 acres)
	Waters of the U.S. Buffer Impacts (2.06 acres)
	WATERS OF THE U.S. LIMITS
	50' WATERS OF THE U.S. BUFFER LIMITS
	SITE BOUNDARY




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REVISIONS		
NO.	DATE	DESCRIPTION

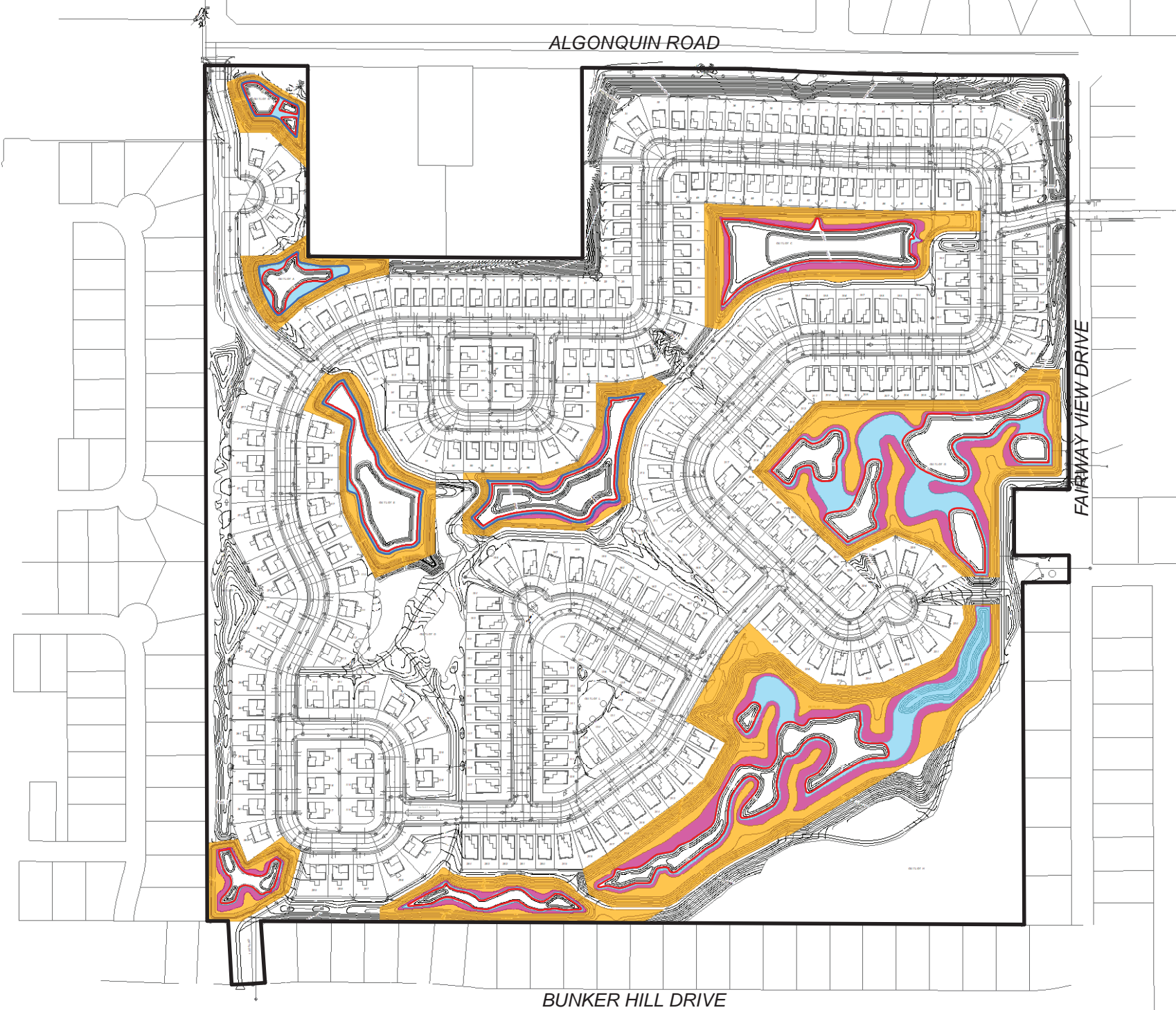
BASE LAYER:
 SEAL:

PROJECT NO.:	19381	DESIGNED BY:	AMM
FILE NAME:	excond	DRAWN BY:	AMM
DATE:	7/10/2020	CHECKED BY:	SJB
SCALE:	1"= 200'	PROJECT MANAGER:	SJB

THE TRAILS OF WOODS CREEK
 ALGONQUIN ILLINOIS

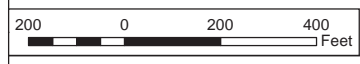
WATERS OF THE U.S. AND BUFFER IMPACTS

EXHIBIT
B



LEGEND

- PICKEREL WEED (14,287 L.F.)
- SHORELINE (4,598 L.F.)
- EMERGENT (3.98 ACRES)
- WET MEADOW(4.20 ACRES)
- PRAIRIE (15.63 ACRES)
- SITE BOUNDARY




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REVISIONS		
NO.	DATE	DESCRIPTION

BASE LAYER: _____

SEAL: _____

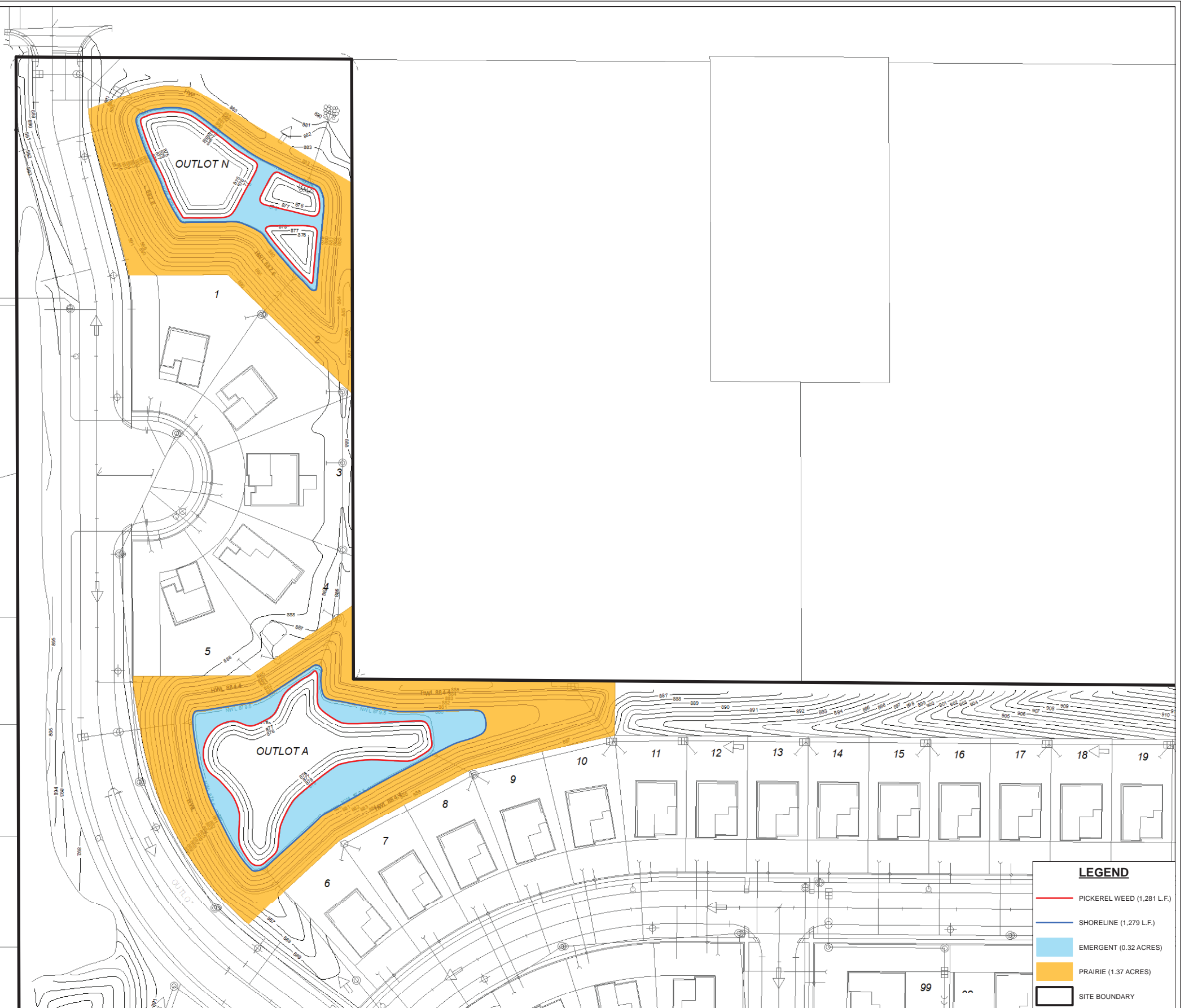
PROJECT NO.: 19381	DESIGNED BY: AMM
FILE NAME: excond	DRAWN BY: AMM
DATE: 7/11/2020	CHECKED BY: SJB
SCALE: 1"= 200'	PROJECT MANAGER: SJB

**THE TRAILS OF
WOODS CREEK**

ALGONQUIN ILLINOIS

**BMP NATIVE
PLANTING PLAN**

EXHIBIT
C1



LEGEND

- PICKEREL WEED (1,281 L.F.)
- SHORELINE (1,279 L.F.)
- EMERGENT (0.32 ACRES)
- PRAIRIE (1.37 ACRES)
- SITE BOUNDARY



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REVISIONS		
NO.	DATE	DESCRIPTION

BASE LAYER:

SEAL:

PROJECT NO:	19381	DESIGNED BY:	AMM
FILE NAME:	excond	DRAWN BY:	AMM
DATE:	7/11/2020	CHECKED BY:	SJB
SCALE:	1" = 50'	PROJECT MANAGER:	SJB

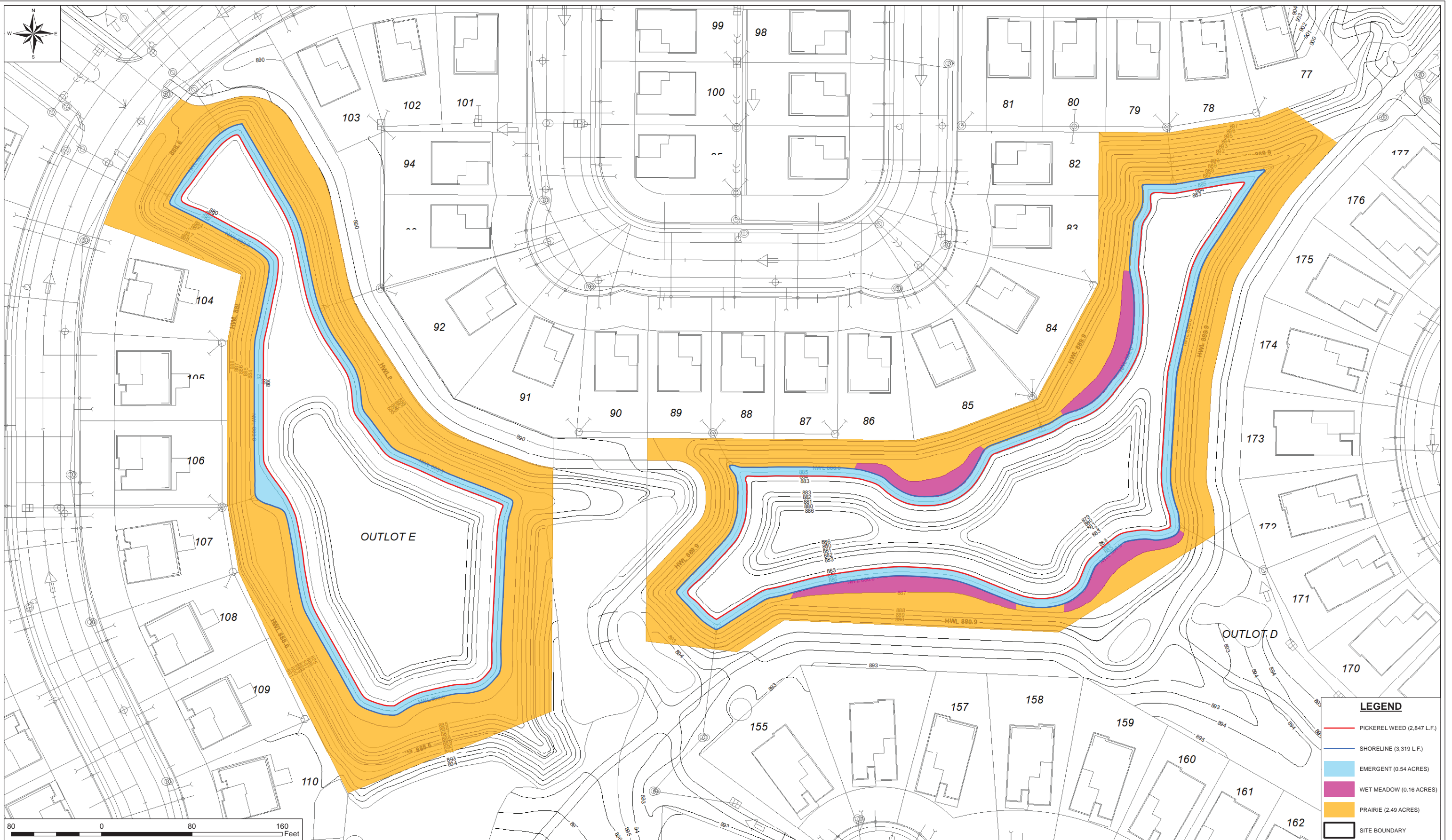
**THE TRAILS OF
WOODS CREEK**

**BMP NATIVE
PLANTING PLAN**

C2

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ALGONQUIN ILLINOIS



LEGEND

- PICKEREL WEED (2,847 L.F.)
- SHORELINE (3,319 L.F.)
- EMERGENT (0.54 ACRES)
- WET MEADOW (0.16 ACRES)
- PRAIRIE (2.49 ACRES)
- SITE BOUNDARY



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REVISIONS		
NO.	DATE	DESCRIPTION

BASE LAYER: _____
 SEAL: _____

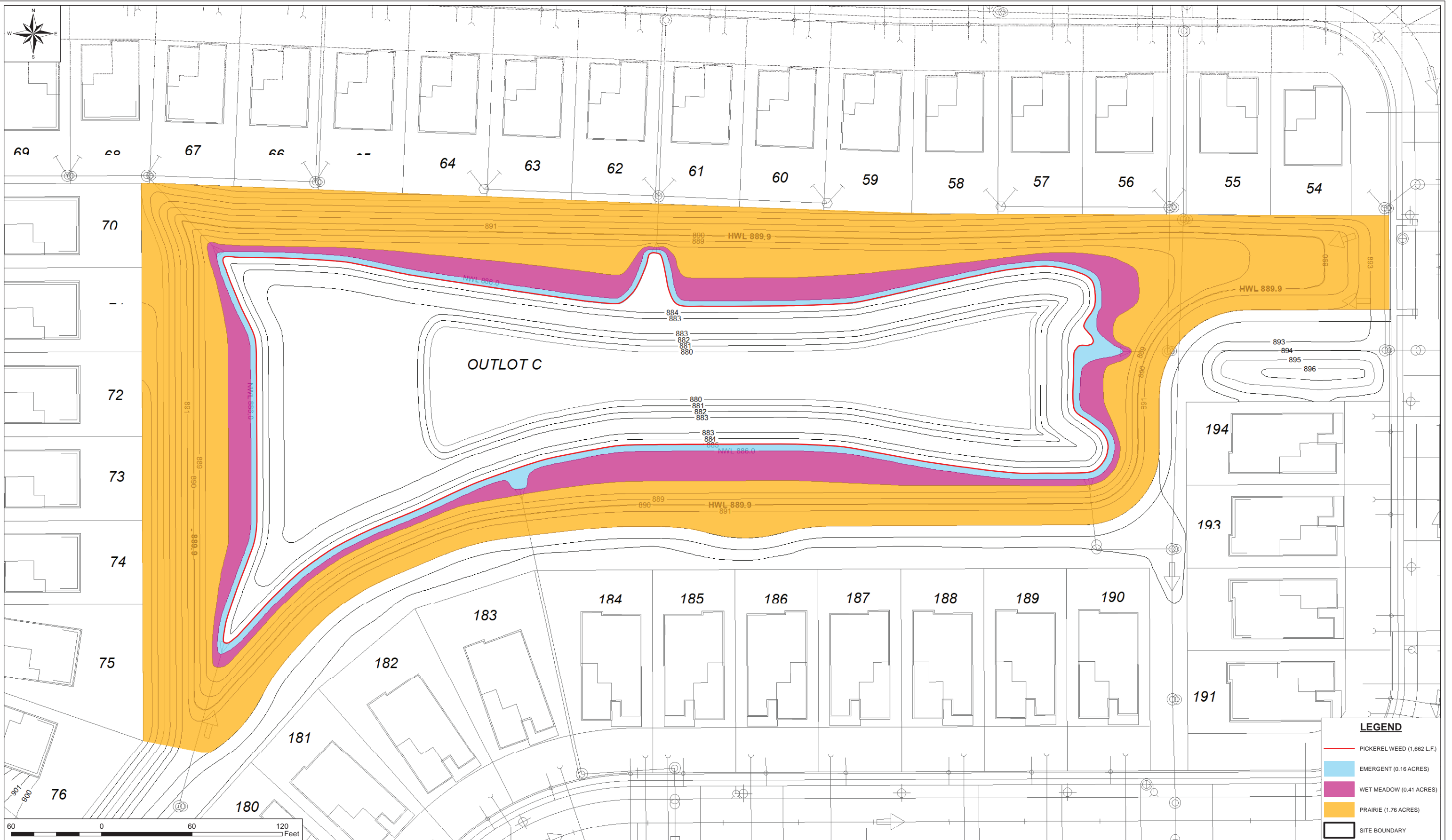
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FILE NAME:	excond	DRAWN BY:	AMM
DATE:	7/11/2020	CHECKED BY:	SJB
SCALE:	1" = 40'	PROJECT MANAGER:	SJB

**THE TRAILS OF
WOODS CREEK**

ALGONQUIN ILLINOIS

**BMP NATIVE
PLANTING PLAN**

C3



LEGEND

- PICKEREL WEED (1,662 L.F.)
- EMERGENT (0.16 ACRES)
- WET MEADOW (0.41 ACRES)
- PRAIRIE (1.76 ACRES)
- SITE BOUNDARY

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REVISIONS		
NO.	DATE	DESCRIPTION

BASE LAYER: _____
SEAL: _____

PROJECT NO.: 19381	DESIGNED BY: AMM
FILE NAME: excond	DRAWN BY: AMM
DATE: 7/11/2020	CHECKED BY: SJB
SCALE: 1" = 30'	PROJECT MANAGER: SJB

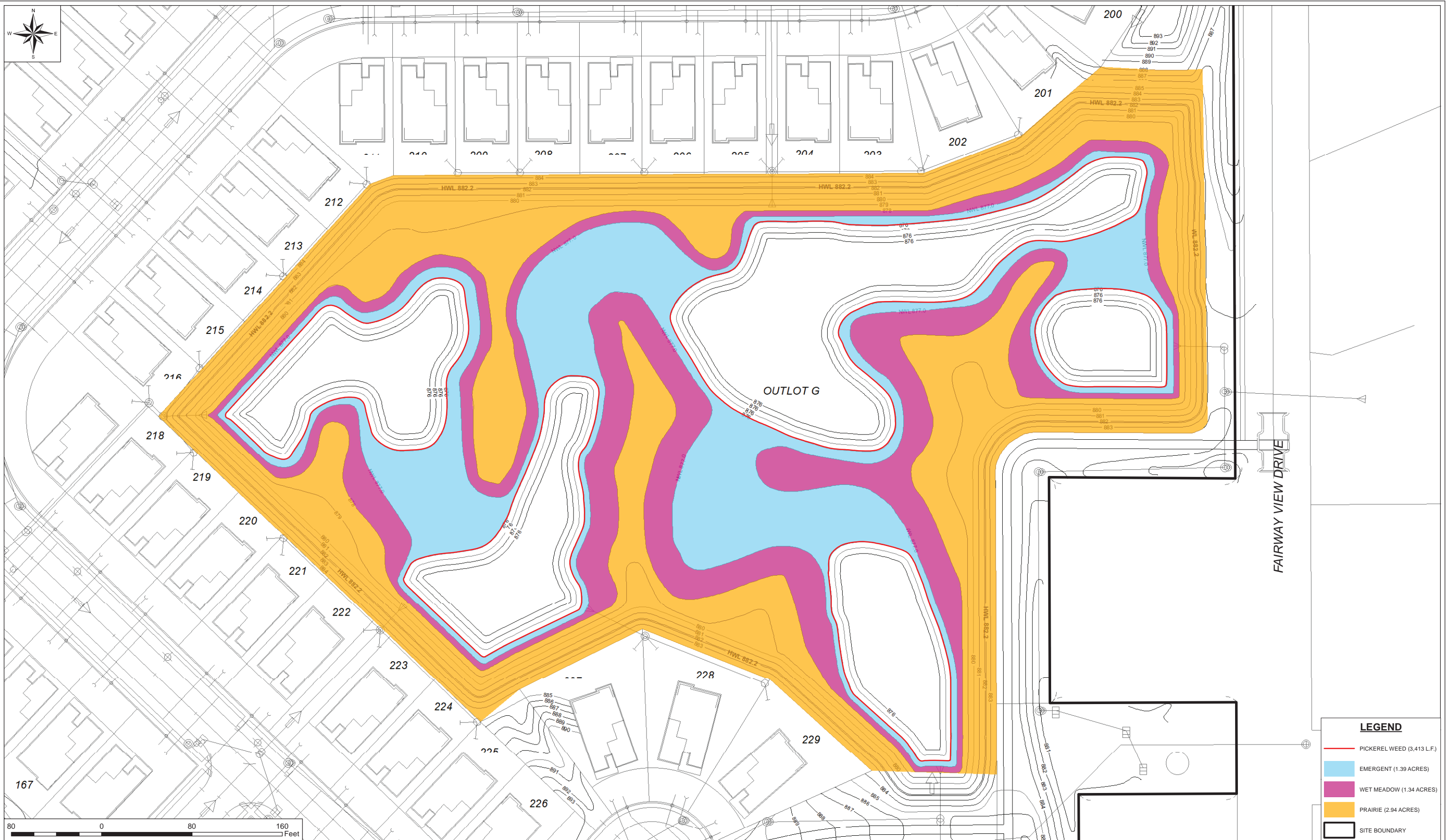
THE TRAILS OF WOODS CREEK
ALGONQUIN ILLINOIS

BMP NATIVE PLANTING PLAN

C4

EXHIBIT

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REVISIONS		
NO.	DATE	DESCRIPTION

BASE LAYER: _____
 SEAL: _____

PROJECT NO.: 19381
 FILE NAME: excond
 DATE: 7/11/2020
 SCALE: 1" = 40'

DESIGNED BY: AMM
 DRAWN BY: AMM
 CHECKED BY: SJB
 PROJECT MANAGER: SJB

THE TRAILS OF WOODS CREEK
 ALGONQUIN ILLINOIS

BMP NATIVE PLANTING PLAN

EXHIBIT
C5

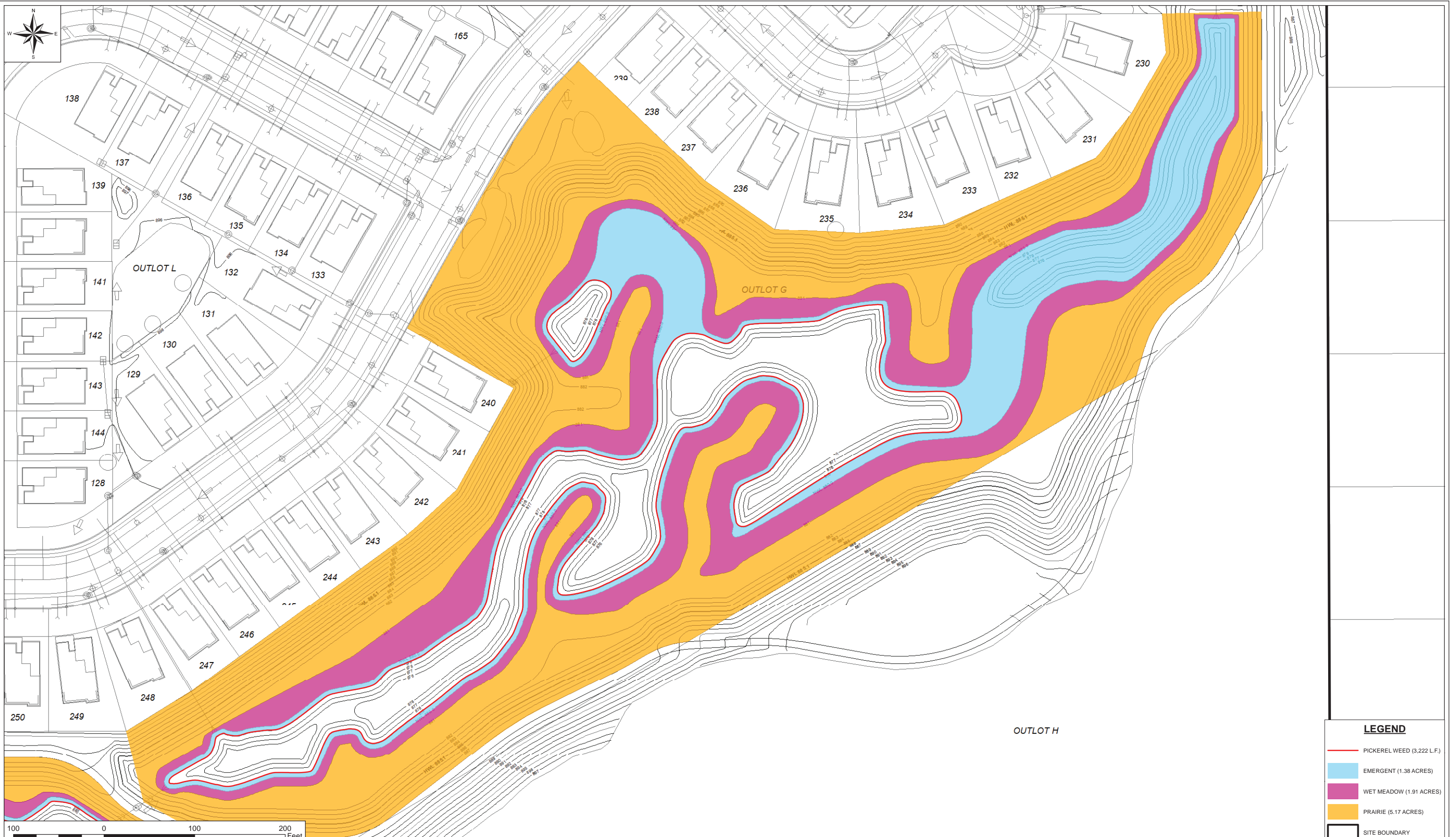
LEGEND

- PICKEREL WEED (3,413 L.F.)
- EMERGENT (1.39 ACRES)
- WET MEADOW (1.34 ACRES)
- PRAIRIE (2.94 ACRES)
- SITE BOUNDARY

FAIRWAY VIEW DRIVE



N:\2019\19381\Drawings\4rcGIS\Wetland\Permit\EXC5bmp_22x34_19381.mxd



LEGEND

	PICKEREL WEED (3,222 L.F.)
	EMERGENT (1.38 ACRES)
	WET MEADOW (1.91 ACRES)
	PRAIRIE (5.17 ACRES)
	SITE BOUNDARY



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REVISIONS		
NO.	DATE	DESCRIPTION

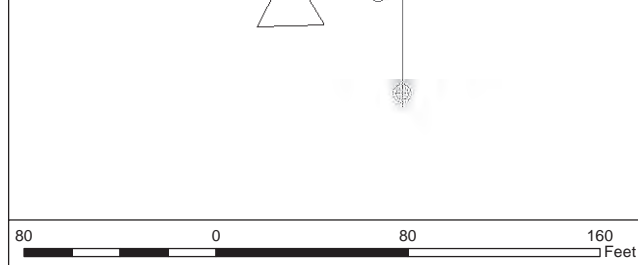
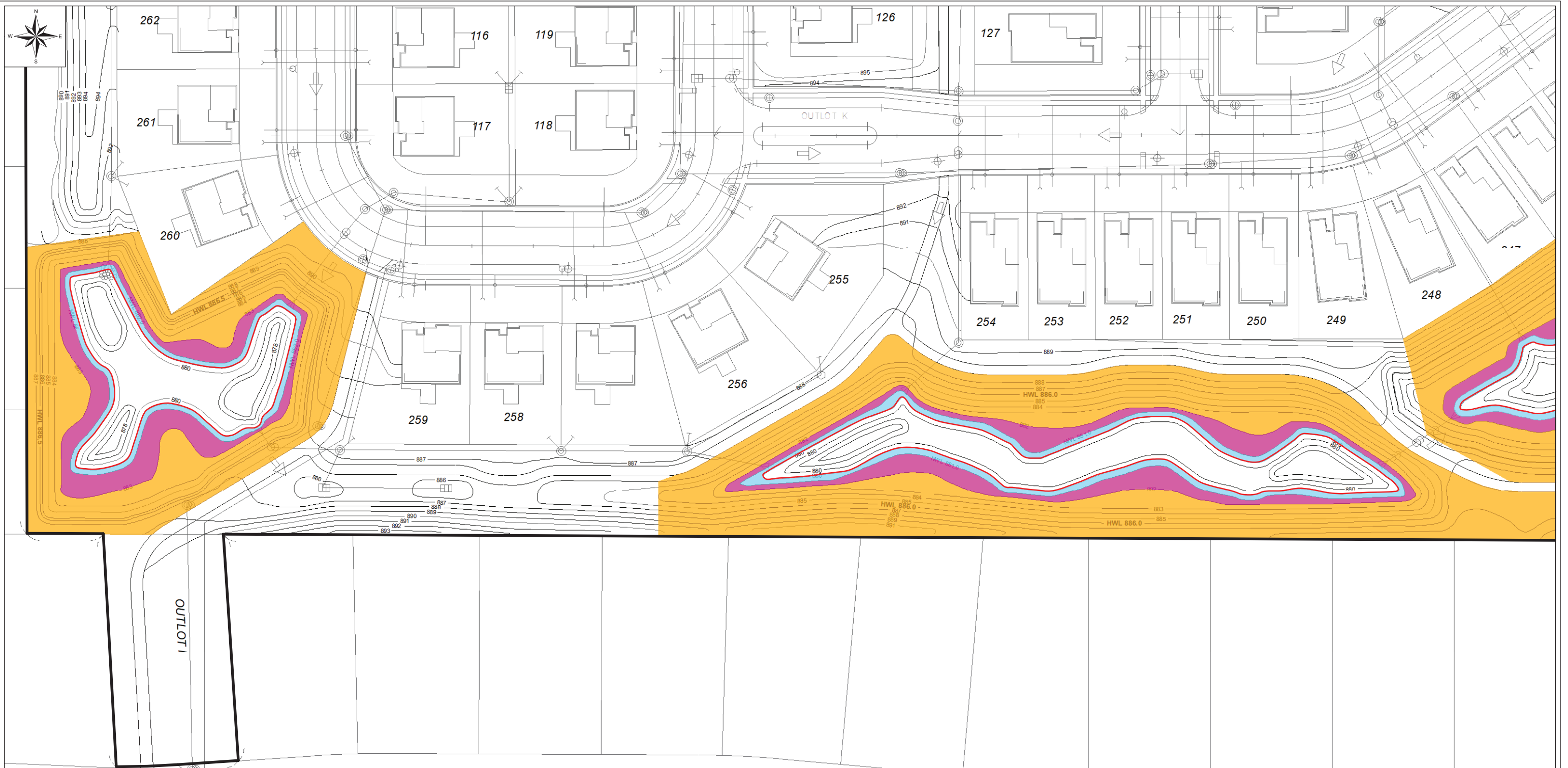
BASE LAYER: _____
SEAL: _____

PROJECT NO.: 19381	DESIGNED BY: AMM
FILE NAME: excond	DRAWN BY: AMM
DATE: 7/11/2020	CHECKED BY: SJB
SCALE: 1" = 50'	PROJECT MANAGER: SJB

THE TRAILS OF WOODS CREEK
ALGONQUIN ILLINOIS

BMP NATIVE PLANTING PLAN

EXHIBIT
C6



LEGEND	
	PICKEREL WEED (1,862 L.F.)
	EMERGENT (0.19 ACRES)
	WET MEADOW (0.38 ACRES)
	PRAIRIE (1.90 ACRES)
	SITE BOUNDARY

BUNKER HILL DRIVE

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REVISIONS		
NO.	DATE	DESCRIPTION

BASE LAYER: _____

SEAL: _____

PROJECT NO.: 19381	DESIGNED BY: AMM
FILE NAME: excond	DRAWN BY: AMM
DATE: 7/11/2020	CHECKED BY: SJB
SCALE: 1" = 40'	PROJECT MANAGER: SJB

THE TRAILS OF WOODS CREEK

ALGONQUIN ILLINOIS

BMP NATIVE PLANTING PLAN

EXHIBIT **C7**



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REVISIONS	
NO.	DATE

BASE LAYER:

SEAL:

PROJECT NO.: 19381
 FILE NAME: excond
 DATE: 7/11/2020
 SCALE: N.T.S.

DESIGNED BY: AMM
 DRAWN BY: AMM
 CHECKED BY: SJB
 PROJECT MANAGER: SJB

**THE TRAILS OF
 WOODS CREEK**
 ALGONQUIN ILLINOIS

**NATIVE SEED
 AND PLUG LIST**

EXHIBIT
D

APPENDIX 3
WETLAND DELINEATION &
ASSESSMENT REPORT



WETLAND DELINEATION AND ASSESSMENT REPORT

PROJECT SITE:

Terrace Hill

Algonquin, McHenry County, Illinois

PREPARED FOR:

Pulte Home Corporation
1900 E. Golf Road, Suite 300
Schaumburg, Illinois 60173

PREPARED BY:

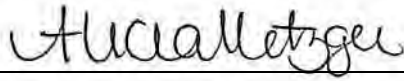
V3 Companies, Ltd.
7325 Janes Avenue
Woodridge, Illinois 60517
630-724-9200

November 20, 2019

Revised: April 15, 2020

We hereby certify that this Wetland Delineation and Assessment Report has been prepared by V3 Companies for use by Pulte Home Corporation, their affiliates, lenders, and assignees.

Project Staff:



Alicia Metzger, CPSC, PWS
Soil Scientist



Daniel Jablonski
Wetland Scientist

Approved by:



Scott J. Brejcha, PWS
Wetland Consulting Group Leader
Natural Resources Division



Thomas E. Slowinski, PWS
Technical Director, Wetlands and Ecology
Natural Resources Division

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- APPENDIX VI – HISTORICAL SITE INFORMATION
- APPENDIX VII – JURISDICTIONAL DETERMINATION

FIGURES

EXECUTIVE SUMMARY

The 138-acre subject property was investigated by V3 Companies (V3) on September 12 and November 20, 2019 to determine the presence, extent and quality of any wetlands or other areas under U.S. Army Corps of Engineers (USACE) and/or Kane County jurisdiction. The Village of Algonquin, located in McHenry County, has adopted the Kane County Stormwater Management Ordinance for all areas within the village limits.

Delineation Summary

No wetlands were identified on the subject property. Thirteen manmade water features (Areas 1-7 & 10-15) used for golf course irrigation, two Waters of the U.S. (Areas 8 & 9), and one roadside ditch (Area 16), were identified on the subject property. A summary of the data points is provided in Table 1.

Woods Creek, a Waters of the U.S., was observed off-site on the east side of Greenway View Drive, located along the eastern property boundary.

A Jurisdictional Determination dated April 8, 2020 identifies Areas 8 & 9 as Waters of the U.S. subject to USACE jurisdiction and Areas 1-7 & 10-16 as water features exempt from regulation (**Appendix VII**).

Regulatory Summary

Pursuant to Section 404 of the Clean Water Act, the U. S. Army Corps of Engineers (USACE) has jurisdiction over the placement of fill or dredged material in all jurisdictional Waters of the United States (Waters). Jurisdictional areas include rivers, streams, tributaries, lakes, natural ponds and wetlands adjacent (bordering, contiguous or neighboring) to these areas. A tributary is characterized by the presence of physical indicators of flow (bed and bank, ordinary high water mark) that contribute flow directly or through another Waters to a traditional navigable or interstate water. Ditches that meet certain criteria can be considered a tributary. Swales and erosional features are generally not considered to be tributaries or Waters.

Wetlands not considered adjacent waters, but located within 4,000 feet of the high tide line or ordinary water mark of traditional navigable waters, interstate waters, or a jurisdictional tributary, can be jurisdictional if they have a significant nexus to a traditional navigable or interstate waters (floodplain Waters/wetlands). A significant nexus determination will be based on hydrologic and ecological factors.

Wetlands not considered adjacent to jurisdictional Waters are considered isolated wetlands and are not regulated under the Clean Water Act.

If less than 0.10 acre of impact to USACE jurisdictional wetlands are proposed, the project would likely qualify for a Regional Permit from the USACE without wetland mitigation. If wetland impacts will consist of between 0.10 acre and 1.0 acre of wetland, a Regional Permit would still be possible, but compensatory mitigation will be required at a minimum ratio of 1.5:1. Mitigation at a higher ratio (typically 3:1 or greater) would be required for impacts to High Quality Aquatic Resources (HQAR). Wetland impacts greater than 1.0 acre will require an Individual Permit, with a public comment period and additional regulatory scrutiny. If a permit from the USACE is not required, USACE buffer requirements are not applicable.

The Village of Algonquin, located in McHenry County, has adopted the Kane County Stormwater Management Ordinance for all areas within the village limits. Under the Kane County Ordinance, mitigation

at a ratio of 1:1 is required for impacts to Low Quality Wetlands; a ratio of 2:1 for impacts to Medium Quality Wetlands; and a ratio of 3:1 for impacts to High Quality Wetlands. Wetland areas with an FQI greater than 25 are considered high quality and non-mitigatable, according to the Kane County Ordinance. Mitigation for wetland impacts to more than one wetland within a site must meet the standards applicable to the highest quality wetland impacted. Mitigation is not required for cumulative isolated wetland impacts less than 0.10 acres. Buffer requirements are dependent on a wetland's size and quality rating.

Table 1. Data Point Summary Table

Area	Data Point	Hydrophytic Vegetation?	Hydric Soils?	Wetland Hydrology?	Wetland (Y/N)
1	X01	N	N	Y	N
2	X02	N	N	Y	N
3	X03	N	N	Y	N
4	X06	N	N	Y	N
5	X05	N	N	Y	N
6	X04	N	N	Y	N
7	X07	N	N	Y	N
8	X08	N	N	Y	N
9	X09	N	N	Y	N
10	X10	N	N	Y	N
11	X11	N	N	Y	N
12	X12	N	N	Y	N
13	X13	N	N	Y	N
14	X14	N	N	Y	N
15	X15	N	N	Y	N
16	X16	N	N	Y	N
17	X17	Y	N	N	N
18	X18	Y	N	N	N

INTRODUCTION AND BACKGROUND

The 138-acre subject property was investigated by V3 Companies (V3) on September 12 and November 20, 2019 to determine the presence, extent and quality of any wetlands or other areas under U.S. Army Corps of Engineers (USACE) and/or Kane County jurisdiction. The City of Algonquin, located in McHenry County, has adopted the Kane County Stormwater Management Ordinance for all areas within the city limits. This report summarizes the results of the field investigation and provides technical documentation for all investigated areas.

The subject property is located north of Bunker Hill Road, south of Algonquin Road, east of Square Barn Road and west of Greenway View Drive in Algonquin, McHenry County, Illinois (Section 25, T43N, R7E; 41.175332°N, -88.356965 °W; Crystal Lake quadrangle, Figure 1).

Four wetlands are mapped on the National Wetlands Inventory (NWI) Map (Figure 2) and include two palustrine, emergent, persistent, seasonally flooded (PEM1C) areas, one palustrine, emergent, persistent, temporarily flooded, farmed (PEM1Af) area and one riverine, perennial, unconsolidated bottom, permanently flooded (R5UBH) area.

No wetlands are identified on the subject property on the McHenry County Wetlands Map (Figure 3).

The USGS Hydrologic Atlas (Figure 4) shows a tributary to Woods Creek in the southeast corner of the subject property.

The 12-Digit Hydrologic Unit Code (HUC) Map (Figure 5) shows that the subject property lies within the Crystal Lake Outlet sub watershed (Hydrologic Unit 071200061201), which is associated with the larger Upper Fox River watershed.

The FEMA Flood Insurance Rate Map (FIRM) (Figure 6) shows flood zone A in the southeast portion of the subject property.

The Flood Zones of McHenry County, Illinois (2019) Map (Figure 7) shows flood zone A in the southeast portion of the subject property.

The eight soil series mapped on the subject property on the Soil Survey of McHenry County, Illinois Map (Figure 8) are listed below.

Table 2. Soils Information

Soil Map Unit	Soil Name	Hydric?
103A	Houghton muck	Yes
146A/B	Elliott silt loam	No
206A	Thorp silt loam	Yes
223B/C2/D2	Varna silt loam	No
232A	Ashkum silty clay loam	Yes
297A/B	Ringwood silt loam	No
530E	Ozaukee silt loam	No
626A	Kish loam	Yes

Figure 9, a Kane County Aerial Image (2018), shows the location of all data points and the locations of the identified areas as collected via a handheld GPS unit.

WETLAND DELINEATION METHODS

Wetland delineations are conducted following the methods given in the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region*. Under the delineation procedures in this manual, an area must exhibit characteristic hydrophytic vegetation, hydric soils, and wetland hydrology to be considered a wetland. If field investigation determines that any of the three parameters are not satisfied, the area usually does not qualify as wetland. Moreover, drainage ditches excavated in dry land are generally not considered jurisdictional waters of the United States by the Corps of Engineers (preamble to 33 CFR Parts 320 through 330, *Federal Register* Vol. 56, No. 219, 41217).

As part of a delineation report, data forms and technical information are required by the U.S. Army Corps of Engineers, to document the three parameters for any area determined to be wetland. Data forms for wetlands identified at the subject property are provided in **Appendix I**. The vegetation data calculated on the data forms reflects the changes made to the National Wetland Plant List as of May 1, 2016. Representative photographs of delineated wetlands are provided in **Appendix II**. A brief description of the field methods used and a description of the three wetland parameters are provided in **Appendix IV**.

Plant species lists are compiled for each area identified, focusing on the plant communities within each identified wetland area. This accumulated floristic data is analyzed using the Floristic Quality Assessment (FQA) methodology, which is an assessment technique for a rapid quality evaluation of vegetation in a defined area. Technical names in the FQA and this report follow the nomenclature of *The National Wetland Plant List: 2014 Update of Wetland Ratings* (Lichvar et. al., 2014). A detailed explanation of the Floristic Quality Assessment method is provided in **Appendix IV**.

As part of the wetland delineation assessment, Illinois Department of Natural Resources (IDNR) and US Fish and Wildlife Service (USFWS) threatened and endangered species evaluations were conducted (**Appendix V**).

The IDNR EcoCAT report shows the following protected resources may be within the vicinity of the subject property:

- Exner Marsh INAI Site/Exner Marsh Nature Preserve
- Black-Crowned Night Heron (*Nycticorax nycticorax*)
- Blanding's Turtle (*Emydoidea blandingii*)
- Common Moorhen (*Gallinula chloropus*)
- Least Bittern (*Ixobrychus exilis*)
- Yellow-Headed Blackbird (*Xanthocephalus xanthocephalus*)

The IDNR confirmed that adverse effects to these resources from the proposed project are unlikely and the EcoCAT consultation has been terminated. A copy of the termination letter is included in **Appendix V**.

The USFWS Section 7 consultation did not find species or critical habitat present on the subject property. A copy of the USFWS Section 7 consultation is included in **Appendix V**.

RESULTS OF THE FIELD INVESTIGATION

JURISDICTIONAL AREAS

Area 8 – Waters of the U.S.

Data Point X08

Area 8 is a Waters of the U.S. and is an unnamed tributary to Woods Creek which continues off-site to the northeast.

Summary:

- Waters of the U.S.
- Jurisdiction: USACE
- Quality: Non-High Quality Aquatic Resource
- Vegetated Buffer Required: 50'

Vegetation: The area consists of an unvegetated Waters of the U.S. and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined Waters of the U.S. and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X08 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. However, Area 8 is a Waters of the U.S., an unnamed tributary to Woods Creek.

Area 9 – Waters of the U.S.

Data Point X09

Area 9 is a Waters of the U.S. and is an unnamed tributary to Woods Creek which continues off-site to the northeast.

Summary:

- Waters of the U.S.
- Jurisdiction: USACE
- Quality: Non-High Quality Aquatic Resource
- Vegetated Buffer Required: 50'

Vegetation: The area consists of an unvegetated Waters of the U.S. and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined Waters of the U.S. and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X09 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. However, Area 9 is a Waters of the U.S., an unnamed tributary to Woods Creek.

ADDITIONAL AREAS INVESTIGATED

Area 1 – Exempt Water Feature

Data Point X01

Area 1 is an exempt manmade water feature used for golf course irrigation that was excavated between 1981 and 1998, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X01 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 1 is a water feature exempt from regulation.

Area 2 – Exempt Water Feature

Data Point X02

Area 2 is an exempt manmade water feature used for golf course irrigation that was excavated in 2009, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X02 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 2 is a water feature exempt from regulation.

Area 3 – Exempt Water Feature

Data Point X03

Area 3 is an exempt manmade water feature used for golf course irrigation that was excavated between 1981 and 1998, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X03 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 3 is a water feature exempt from regulation.

Area 4 – Exempt Water Feature

Data Point X06

Area 4 is an exempt manmade water feature used for golf course irrigation that was excavated between 1981 and 1998, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X06 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 4 is a water feature exempt from regulation.

Area 5 – Exempt Water Feature

Data Point X05

Area 5 is an exempt manmade water feature used for golf course irrigation that was excavated between 1981 and 1998, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X05 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 5 is a water feature exempt from regulation.

Area 6 – Exempt Water Feature

Data Point X04

Area 6 is an exempt manmade water feature used for golf course irrigation that was excavated between 1981 and 1998, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X04 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 6 is a water feature exempt from regulation.

Area 7 – Exempt Water Feature

Data Point X07

Area 7 is an exempt manmade water feature used for golf course irrigation that was excavated between 1981 and 1998, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X07 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 7 is a water feature exempt from regulation.

Area 10 – Exempt Water Feature

Data Point X10

Area 10 is an exempt manmade water feature used for golf course irrigation that was excavated between 1981 and 1998, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X10 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 10 is a water feature exempt from regulation.

Area 11 – Exempt Water Feature

Data Point X11

Area 11 is an exempt manmade water feature used for golf course irrigation that was excavated in 2009, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X11 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 11 is a water feature exempt from regulation.

Area 12 – Exempt Water Feature

Data Point X12

Area 12 is an exempt manmade water feature used for golf course irrigation that was excavated in 2009, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X12 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 12 is a water feature exempt from regulation.

Area 13 – Exempt Water Feature

Data Point X13

Area 13 is an exempt manmade water feature used for golf course irrigation that was excavated in 2009, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X13 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 13 is a water feature exempt from regulation.

Area 14 – Exempt Water Feature

Data Point X14

Area 14 is an exempt manmade water feature used for golf course irrigation that was excavated in 2009, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X14 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 14 is a water feature exempt from regulation.

Area 15 – Exempt Water Feature

Data Point X15

Area 15 is an exempt manmade water feature used for golf course irrigation that was excavated in 2009, as seen on historical maps (Appendix VI).

Vegetation: The area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined water feature and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X15 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. Area 15 is a water feature exempt from regulation.

Area 16 – Exempt Water Feature

Data Point X16

Area 16 is a roadside ditch located along the north property boundary, south of Algonquin Road and is exempt from regulation.

Vegetation: The area consists of unvegetated rock and does not satisfy the vegetation criterion.

Soils: This area is a rock-lined roadside ditch and does not satisfy the soils criterion.

Hydrology: The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

Conclusion: Data Point X16 fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a roadside ditch exempt from regulation.

Area 17 – Upland

Data Point X17

Area 17 is located along the eastern side of the project area, west of Fairway View Drive.

Vegetation: The dominant plant species at Data Point X17 is Kentucky bluegrass (*Poa pratensis*). The dominant species is hydrophytic, so the vegetation criterion is satisfied.

Soils: The soil profile at Data Point X17 consisted of 0-15 inches of mixed fill comprised of very dark grayish brown (10YR 3/2) and brown (10YR 4/3) silty clay loam. Hydric soil indicators were not observed, so the soils criterion is not satisfied.

Hydrology: Neither primary nor secondary wetland hydrology indicators were observed at Data Point X17, so the hydrology criterion is not satisfied.

Conclusion: Data Point X17 fails to satisfy the soil and hydrology criteria and does not qualify as wetland.

Area 18 – Upland

Data Point X18

Area 18 is located along the southwestern corner of the project area, north of Bunker Hill Drive.

Vegetation: The dominant plant species at Data Point X18 is Kentucky bluegrass (*Poa pratensis*). The dominant species is hydrophytic, so the vegetation criterion is satisfied.

Soils: The soil profile at Data Point X18 consisted of 0-15 inches of mixed fill comprised of black (10YR 2/1), very dark grayish brown (10YR 3/2) and brown (10YR 4/3) silty clay loam. Hydric soil indicators were not observed, so the soils criterion is not satisfied.

Hydrology: Neither primary nor secondary wetland hydrology indicators were observed at Data Point X18, so the hydrology criterion is not satisfied.

Conclusion: Data Point X18 fails to satisfy the soil and hydrology criteria and does not qualify as wetland.

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APPENDIX I

WETLAND DELINEATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X01
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 41.175332 Long.: -88.356965 Datum: NAD 1983
 Soil Map Unit Name: Water (W) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X01**

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+							Rock	

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) <p>³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): <u>3</u>	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	

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

Remarks:
 The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X02
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.173480 Long.: -88.355330 Datum: NAD 1983
 Soil Map Unit Name: Ashkum silty clay loam (232A) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%	_____	
2. _____	0	<input type="checkbox"/> 0.0%	_____	
3. _____	0	<input type="checkbox"/> 0.0%	_____	
4. _____	0	<input type="checkbox"/> 0.0%	_____	
5. _____	0	<input type="checkbox"/> 0.0%	_____	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%	_____	
2. _____	0	<input type="checkbox"/> 0.0%	_____	
3. _____	0	<input type="checkbox"/> 0.0%	_____	
4. _____	0	<input type="checkbox"/> 0.0%	_____	
5. _____	0	<input type="checkbox"/> 0.0%	_____	
	0	= Total Cover		
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%	_____	
2. _____	0	<input type="checkbox"/> 0.0%	_____	
3. _____	0	<input type="checkbox"/> 0.0%	_____	
4. _____	0	<input type="checkbox"/> 0.0%	_____	
5. _____	0	<input type="checkbox"/> 0.0%	_____	
6. _____	0	<input type="checkbox"/> 0.0%	_____	
7. _____	0	<input type="checkbox"/> 0.0%	_____	
8. _____	0	<input type="checkbox"/> 0.0%	_____	
9. _____	0	<input type="checkbox"/> 0.0%	_____	
10. _____	0	<input type="checkbox"/> 0.0%	_____	
	0	= Total Cover		
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%	_____	
2. _____	0	<input type="checkbox"/> 0.0%	_____	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X02**

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+							Rock	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
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Remarks:
 This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<p>Secondary Indicators (minimum of two required)</p> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)	
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<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u> 3 </u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X03
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.172775 Long.: -88.356946 Datum: NAD 1983
 Soil Map Unit Name: Ashkum silty clay loam (232A) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X03**

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+							Rock	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
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Remarks:
 This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)	

<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>3</u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
---	--

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

Remarks:
 The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X04
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.172281 Long.: -88.356791 Datum: NAD 1983
 Soil Map Unit Name: Kish loam (626A) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X04**

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+							Rock	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
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Remarks:
 This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<p>Secondary Indicators (minimum of two required)</p> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)	
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<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u> 3 </u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
---	--

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

Remarks:
 The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X05
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.172463 Long.: -88.357131 Datum: NAD 1983
 Soil Map Unit Name: Kish loam (626A) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X05**

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+							Rock	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
---	--

Remarks:
 This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<p>Secondary Indicators (minimum of two required)</p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)
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<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>3</u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X06
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.172309 Long.: -88.356289 Datum: NAD 1983
 Soil Map Unit Name: Water (W) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X06**

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+							Rock	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
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Remarks:
 This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)	

<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>3</u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X07
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.170553 Long.: -88.355877 Datum: NAD 1983
 Soil Map Unit Name: Water (W) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X07**

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+							Rock	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
--	--	---

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

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
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Remarks:
 This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)	

<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>3</u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X08
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.170178 Long.: -88.356967 Datum: NAD 1983
 Soil Map Unit Name: Water (W) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland; however, Area 8 is a Waters of the U.S.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/>	0.0%	
2. _____	0	<input type="checkbox"/>	0.0%	
3. _____	0	<input type="checkbox"/>	0.0%	
4. _____	0	<input type="checkbox"/>	0.0%	
5. _____	0	<input type="checkbox"/>	0.0%	
	0	=	Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/>	0.0%	
2. _____	0	<input type="checkbox"/>	0.0%	
3. _____	0	<input type="checkbox"/>	0.0%	
4. _____	0	<input type="checkbox"/>	0.0%	
5. _____	0	<input type="checkbox"/>	0.0%	
	0	=	Total Cover	
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/>	0.0%	
2. _____	0	<input type="checkbox"/>	0.0%	
3. _____	0	<input type="checkbox"/>	0.0%	
4. _____	0	<input type="checkbox"/>	0.0%	
5. _____	0	<input type="checkbox"/>	0.0%	
6. _____	0	<input type="checkbox"/>	0.0%	
7. _____	0	<input type="checkbox"/>	0.0%	
8. _____	0	<input type="checkbox"/>	0.0%	
9. _____	0	<input type="checkbox"/>	0.0%	
10. _____	0	<input type="checkbox"/>	0.0%	
	0	=	Total Cover	
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/>	0.0%	
2. _____	0	<input type="checkbox"/>	0.0%	
	0	=	Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated Waters of the U.S. and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X08**

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+							Rock	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
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Remarks:
 This area is a rock-lined Waters of the U.S. and does not satisfy the soils criterion.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<p>Secondary Indicators (minimum of two required)</p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)
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<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u> 3 </u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X09
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.169277 Long.: -88.358547 Datum: NAD 1983
 Soil Map Unit Name: Ashkum silty clay loam (232A) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland; however Area 9 is a Waters of the U.S.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated Waters of the U.S. and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X09**

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+							Rock	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
--	--	---

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

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
---	--

Remarks:
 This area is a rock-lined Waters of the U.S. and does not satisfy the soils criterion.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<p>Secondary Indicators (minimum of two required)</p> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)	
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<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u> 3 </u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
---	--

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

Remarks:
 The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X10
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.170019 Long.: -88.358638 Datum: NAD 1983
 Soil Map Unit Name: Water (W) NWI classification: PEM1Af

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X10**

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+							Rock	

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) <p>³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): <u>3</u>	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	

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

Remarks:
The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X11
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.170714 Long.: -88.358415 Datum: NAD 1983
 Soil Map Unit Name: Ashkum silty clay loam (232A) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X11**

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+							Rock	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
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Remarks:
 This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<p>Secondary Indicators (minimum of two required)</p> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)	
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<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u> 3 </u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X12
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.171190 Long.: -88.359894 Datum: NAD 1983
 Soil Map Unit Name: Ashkum silty clay loam (232A) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X12**

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+							Rock	

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): <u>3</u>	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	

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

Remarks:
The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X13
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.172157 Long.: -88.360036 Datum: NAD 1983
 Soil Map Unit Name: Ashkum silty clay loam (232A) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X13**

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+							Rock	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
---	--

Remarks:
 This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<p>Secondary Indicators (minimum of two required)</p> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)
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<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>3</u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
---	--

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

Remarks:
 The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X14
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.171966 Long.: -88.363564 Datum: NAD 1983
 Soil Map Unit Name: Ashkum silty clay loam (232A) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X14**

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+							Rock	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
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Remarks:
 This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<p>Secondary Indicators (minimum of two required)</p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)
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<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>3</u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X15
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.173366 Long.: -88.362880 Datum: NAD 1983
 Soil Map Unit Name: Water (W) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt water feature.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____		<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 4.000

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)

¹ 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.)
 This area consists of an unvegetated, manmade water feature and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X15**

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+							Rock	

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
This area is a rock-lined water feature and does not satisfy the soils criterion.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): <u>3</u>	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	

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

Remarks:
The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 3 inches, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 12-Sep-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X16
 Investigator(s): A. Metzger, D. Jablonski Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Channel (active) Local relief (concave, convex, none): concave
 Slope: 0.0% / 0.0 ° Lat.: 42.175586 Long.: -88.363521 Datum: NAD 1983
 Soil Map Unit Name: Ringwood silt loam (297B) NWI classification: None

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the vegetation and soils criterion and does not qualify as wetland. This area is a manmade exempt roadside ditch.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Herb Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 0.000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤3.0 ¹

4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation ¹ (Explain)

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

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)
 This area consists of an unvegetated roadside ditch and does not satisfy the vegetation criterion.

SOIL

Sampling Point: **X16**

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+							Gravel	

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) <p>³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
This area is a rock-lined ditch and does not satisfy the soils criterion.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No Depth (inches): 1

Water Table Present? Yes No Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes No Depth (inches): _____

Wetland Hydrology Present? Yes No

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

Remarks:
The presence of primary wetland hydrology indicator A1, Surface Water to a depth of 1 inch, satisfies the hydrology criterion.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 20-Nov-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X17
 Investigator(s): A. Metzger Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.171441 Long.: -88.354936 Datum: NAD 1983
 Soil Map Unit Name: Ashkum silty clay loam (232A) NWI classification: None

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the soils and hydrology criterion and does not qualify as wetland.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Herb Stratum (Plot size: <u>5 feet</u>)				
1. <u>Poa pratensis</u>	100	<input checked="" type="checkbox"/> 100.0%	FAC	
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (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 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 100 x 3 = 300

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 100 (A) 300 (B)

Prevalence Index = B/A = 3.000

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)

¹ 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.)
 The dominant species is hydrophytic, so the vegetation criterion is satisfied.

SOIL

Sampling Point: **X17**

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		
0-15	10YR	3/2					Silty Clay Loam	Mixed fill
	10YR	4/3						

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) <p>³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
Hydric soil indicators were not observed, so the soils criterion is not satisfied.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	

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

Remarks:
Neither primary nor secondary wetland hydrology indicators were observed, so the hydrology criterion is not satisfied.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Terrace Hill City/County: Algonquin/McHenry Sampling Date: 20-Nov-19
 Applicant/Owner: Pulte Home Corporation State: IL Sampling Point: X18
 Investigator(s): A. Metzger Section, Township, Range: S 25 T 43N R 7E
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): flat
 Slope: 0.0% / 0.0 ° Lat.: 42.168339 Long.: -88.363714 Datum: NAD 1983
 Soil Map Unit Name: Houghton muck (103A) NWI classification: None

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: This location fails to satisfy the soils and hydrology criterion and does not qualify as wetland.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30 feet</u>)				
1.	0	<input type="checkbox"/> 0.0%		
2.	0	<input type="checkbox"/> 0.0%		
3.	0	<input type="checkbox"/> 0.0%		
4.	0	<input type="checkbox"/> 0.0%		
5.	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)				
1.	0	<input type="checkbox"/> 0.0%		
2.	0	<input type="checkbox"/> 0.0%		
3.	0	<input type="checkbox"/> 0.0%		
4.	0	<input type="checkbox"/> 0.0%		
5.	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Herb Stratum (Plot size: <u>5 feet</u>)				
1. <u>Poa pratensis</u>	100	<input checked="" type="checkbox"/> 100.0%	FAC	
2.	0	<input type="checkbox"/> 0.0%		
3.	0	<input type="checkbox"/> 0.0%		
4.	0	<input type="checkbox"/> 0.0%		
5.	0	<input type="checkbox"/> 0.0%		
6.	0	<input type="checkbox"/> 0.0%		
7.	0	<input type="checkbox"/> 0.0%		
8.	0	<input type="checkbox"/> 0.0%		
9.	0	<input type="checkbox"/> 0.0%		
10.	0	<input type="checkbox"/> 0.0%		
	100	= Total Cover		
Woody Vine Stratum (Plot size: <u>5 feet</u>)				
1.	0	<input type="checkbox"/> 0.0%		
2.	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (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 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 100 x 3 = 300

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 100 (A) 300 (B)

Prevalence Index = B/A = 3.000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0 ¹

4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation ¹ (Explain)

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

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)
 The dominant species is hydrophytic, so the vegetation criterion is satisfied.

SOIL

Sampling Point: **X18**

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		
0-15	10YR	2/1					Silty Clay Loam	Mixed fill
	10YR	3/2						
	10YR	4/3						

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) <p>³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 Hydric soil indicators were not observed, so the soils criterion is not satisfied.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	

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

Remarks:
 Neither primary nor secondary wetland hydrology indicators were observed, so the hydrology criterion is not satisfied.

APPENDIX II
REPRESENTATIVE PHOTOGRAPHS



PHOTO 1

09/12/2019

View of Area 1 facing southeast.



PHOTO 2

09/12/2019

View of Area 2 facing southwest.



PHOTO 3

09/12/2019

View of Area 3 facing southwest.



PHOTO 4

09/12/2019

View of Area 4 facing south.



PHOTO 5

09/12/2019

View of Area 5 facing west.



PHOTO 6

09/12/2019

View of Area 6 facing southwest.



PHOTO 7

09/12/2019

View of Area 7 facing southwest.



PHOTO 8

09/12/2019

View of Area 8 facing southwest.



PHOTO 9

09/12/2019

View of Area 9 facing south.



PHOTO 10

09/12/2019

View of Area 10 facing west.



PHOTO 11

09/12/2019

View of Area 11 facing west.



PHOTO 12

09/12/2019

View of Area 12 facing east.



PHOTO 13

09/12/2019

View of Area 13 facing east.



PHOTO 14

09/12/2019

View of Area 14 facing south.



PHOTO 15

09/12/2019

View of Area 15 facing southwest.



PHOTO 16

09/12/2019

View of Area 16, the roadside ditch, facing southeast.



PHOTO 17

09/12/2019

View of Area 16 facing northwest.



PHOTO 18

09/12/2019

View of the culvert under Algonquin Road, facing northeast.



PHOTO 19

11/20/2019

View of Area 17 near Data Point X17 facing west.



PHOTO 20

11/20/2019

View of Area 17 near Data Point X17 facing east.



PHOTO 21

11/20/2019

View of Area 17 near Data Point X17 facing northeast.



PHOTO 22

11/20/2019

View of Area 18 facing northwest.



PHOTO 23

11/20/2019

View of Area 18 facing southeast.



PHOTO 24

11/20/2019

View of Area 18 facing southwest.

APPENDIX III
REGULATORY INFORMATION

REGULATORY REQUIREMENTS

U.S. ARMY CORPS OF ENGINEERS

Pursuant to Section 404 of the Clean Water Act, the U. S. Army Corps of Engineers (USACE) has jurisdiction over the placement of fill or dredged material in all jurisdictional waters of the United States. Jurisdictional areas include rivers, streams, tributary waterways, lakes, natural ponds, and wetlands adjacent to these areas. A Section 404 permit must be obtained before placing any fill material within a jurisdictional area.

Wetlands that lack a continuous surface connection through a relatively permanent tributary to traditionally navigable waters are considered isolated wetlands and are not regulated under the Clean Water Act.¹ To be considered relatively permanent a tributary must have continuous flow at least seasonally (typically at least three months). Swales and erosional features are generally not considered to be tributaries or waters of the United States. Ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow are also generally not waters of the U. S. Wetlands adjacent to tributaries and ditches that do not have a relatively continuous flow will be regulated only if they have a significant nexus to traditionally navigable waters. A significant nexus determination will be based on hydrologic and ecological factors.

General permits, including nationwide and regional permits, are designed to expedite the processing of permits for minor non-controversial projects that are similar in nature and of minimal environmental impact. Currently, 52 nationwide permits have been issued. They became effective on March 19, 2017, and will expire on March 18, 2022.

Within the boundaries of the Chicago District, USACE, most NWP's were replaced with the Regional Permit Program (RPP), which were reissued on April 1, 2017 and will expire on April 1, 2022. Category I RPPs will generally authorize impacts of 0.50 acres or less. Category II RPPs will authorize impacts of between 0.50 acres and 1.0 acre. Any projects proposing impacts to High Quality Aquatic Resources will be processed under Category II. Compensatory wetland mitigation, at a ratio of 1.5:1, is required for all projects that impact more than 0.10 acre. Mitigation for impacts to High Quality Aquatic Resources typically is required at a higher ratio (generally 3:1 or greater).

High Quality Aquatic Resources (HQARs) are aquatic areas considered to be regionally critical due to their uniqueness, scarcity, and/or value, and other wetlands considered to perform functions important to the public interest, as defined in 33 CFR 320.4(b)(2). These resources include Advanced Identification (ADID) sites, bogs, ephemeral pools, fens, forested wetlands, sedge meadows, seeps, streams rated Class A or B in the Illinois Biological Stream Characterization study, streamside marshes, wet prairies, wetlands supporting Federal or Illinois endangered or threatened species, and wetlands with a floristic quality index of 20 or greater, or mean C-value of 3.5 or greater. These areas generally are regarded as unsuitable for dredge or fill activities. See Appendix IV for definitions of the wetland types, and criteria used to evaluate the presence of HQARs during wetland delineations.

¹ December 2, 2008, USEPA and Department of the Army Joint Memorandum, Clean Water Act Jurisdiction Following the U. S. Supreme Court Decision in *Rapanos v. United States* and *Carabell v. United States*.

Wetland impacts greater than 1.0 acre will require authorization under an individual permit (IP), which requires greater scrutiny of the proposed project by the USACE and other concerned government agencies, and a comment period from the general public.

McHENRY COUNTY REQUIREMENTS

Pursuant to the McHenry County Stormwater Management Ordinance, amended April 5, 2015, the McHenry County Stormwater Committee (MCSC) has authority over Isolated Waters of McHenry County, including wetlands. Stormwater management and wetland submittal reviews are conducted by the county in unincorporated areas, while certified communities conduct stormwater and wetland reviews within their corporate limits.

Before site development, a wetland delineation is required using the current USACE methodology. A Watershed Development Permit is required for any regulated development including those that create wetland impact within an area defined as a Waters of the U.S. (WOTUS) or Isolated Waters of McHenry County (IWMC); or in buffer areas adjoining to Waters of the U. S. or Isolated Waters of McHenry County.

Vegetated upland buffers are required for all areas defined as Waters of the U.S. or Isolated Waters of McHenry County, including isolated wetlands, lakes and ponds. Buffers are areas of predominantly vegetated land adjacent to drainageways, wetlands, lakes, ponds or other surface waters for the purpose of eliminating or minimizing adverse impacts to such areas. Buffer functions include controlling erosion, stabilizing banks and shorelines, maintaining or enhancing water quality, and providing habitat corridors for wildlife. Different buffer zones are required for linear channels or for various water bodies, including wetlands that may not be under U. S. Army Corps of Engineers jurisdiction (i.e., isolated wetlands). Buffer widths can vary widely depending primarily on the wetland size and perceived quality. Actual or proposed site design may affect buffer widths, which generally range from a 30 feet minimum to 100 feet for high quality areas, such as ADID wetlands. A preliminary determination of buffer width for each wetland is included in this report.

Under the McHenry County Ordinance, Category I permits will authorize IWMC impacts of 1.0 acres or less. Category II permits will authorize IWMC impacts of between 1.0 acres and 2.0 acres with compensatory wetland mitigation at a ratio of 1.5:1. Mitigation for impacts to High Functional Value Wetlands (HFVW) is required at a minimum ratio of 3:1. Mitigation for impacts to High Quality Aquatic Resources (HQAR) or High Quality Habitat Sites (HQHS) is required at a minimum ratio of 5:1.

IWMC impacts greater than 2.0 acres, or that impact HQAR, HQHS, and/or HFVW, require a Category III permit, which requires greater scrutiny of the proposed project and an alternative analysis for wetland avoidance.

APPENDIX IV
DELINEATION METHODS AND FLORISTIC
ANALYSIS

WETLAND DELINEATION METHODS

The site was field-inspected and plant species lists were recorded to document the vegetation types present. A wetland indicator status is assigned to each plant species based on a regional list published by the U.S. Army Corps of Engineers in 2016. The categories are based on the estimated probability that a species would be naturally encountered in a wetland. Under the *Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region*, the area is considered to be dominated by hydrophytic vegetation and representative of a wetland plant community by one of two methods, the dominance test or the prevalence index. The dominance test is satisfied if greater than 50% of the dominant plant species in a given area have a wetland indicator status of FAC, FACW, or OBL. The prevalence index assigns a numeric value to the wetland indicator status, and uses a weighted-average of the wetland indicator status of all plant species present in the sampling area. A wetland plant community is present if the prevalence index is less than 3.0.

Plant Wetland Indicator Status Categories

Indicator Category	Symbol	Indicator Definition
Obligate Wetland Plants	OBL	Plants that occur almost always (estimated probability greater than 99%) in wetlands under natural conditions, but which may also occur rarely in non-wetlands.
Facultative Wetland Plants	FACW	Plants that usually occur in wetlands (estimated probability 67% to 99%), but occasionally are found in non-wetlands.
Facultative Plants	FAC	Plants with a similar likelihood (estimated probability 33% to 67%) of occurring in both wetlands and non-wetlands.
Facultative Upland Plants	FACU	Plants that usually occur in non-wetlands (estimated probability 67% to 99%) but occasionally are found in wetlands.
Obligate Upland Plants	UPL	Plants that occur almost always (estimated probability greater than 99%) in non-wetlands under natural conditions, but which may also occur rarely in wetlands.

In addition to being dominated by hydrophytic vegetation, each suspect wetland must also exhibit hydric soils and wetland hydrology. As defined in the Federal Register (*Federal Register, Volume 59: July 13, 1994*), "A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part." According to the National Technical Committee for Hydric Soils, documentation of the presence or absence of a hydric soil can only be determined through on-site investigation, not strictly by its classification of an area on soil survey maps. Soils are identified as hydric in the field if they possess certain indicators, as defined in the *Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region*. These field indicators are a regionally specific subset of the field indicators described in the *Field Indicators of Hydric Soils in the United States* (Version 8.0; NRCS, 2016). The absence of a field indicator in a soil does not exclude that soil from being classified as hydric. Soil series, soil color, the presence of mottling or gleying, and depth to water table are

determined and recorded in the field. These features, when present, may indicate a hydric soil when hydric soil field indicators are absent.

Determinations of hydrology are based on observations wetland hydrology indicators. There are two types of indicators, primary indicators and secondary indicators. A determination of wetland hydrology requires the presence of one primary indicator or two secondary indicators. Hydrology indicators are placed into four groups, these being observations of surface water or saturated soils, evidence of recent inundation, evidence of recent soil saturation, or evidence of other site conditions or data. A listing of the wetland hydrology indicators is provided in the table below.

Indicator	Category	
	Primary	Secondary
Group A – Observation of Surface Water or Saturated Soils		
A1 – Surface water	X	
A2 – High water table	X	
A3 – Saturation	X	
Group B – Evidence of Recent Inundation		
B1 – Water marks	X	
B2 – Sediment deposits	X	
B3 – Drift deposits	X	
B4 – Algal mat or crust	X	
B5 – Iron deposits	X	
B7 – Inundation visible on aerial imagery	X	
B8 – Sparsely vegetated concave surface	X	
B9 – Water-stained leaves	X	
B13 – Aquatic fauna	X	
B14 – True aquatic plants	X	
B6 – Surface soil cracks		X
B10 – Drainage patterns		X
Group C – Evidence of Current or Recent Soil Saturation		
C1 – Hydrogen sulfide odor	X	
C3 – Oxidized rhizospheres along living roots	X	
C4 – Presence of reduced iron	X	
C6 – Recent iron reduction in tilled soils	X	
C7 – Thin muck surface	X	
C2 – Dry-season water table		X
C8 – Crayfish burrows		X
C9 – Saturation visible on aerial imagery		X
Group D – Evidence from Other Site Conditions or Data		
D9 – Gauge or well data	X	
D1 – Stunted or stressed plants		X
D2 – Geomorphic position		X
D5 – FAC-neutral test		X

FLORISTIC QUALITY ASSESSMENT

Plant communities of the site were evaluated with the Floristic Quality Assessment (FQA) methodology, a widely-used technique used for rapid assessment of the floristic quality in a defined area or plant community. In using FQA, the presence of each plant species is recorded, generating a species inventory. This inventory is entered into computer software that was used to generate the species lists used in this report. Floristic quality calculations are also generated that provides a compilation of various floristic quality data, resulting in a determination of the floristic quality of the subject area.

The floristic quality data for an area partially indicates its quality as a natural area (i.e., relative to known or perceived pre-settlement or disturbance conditions). One indicator of the degree of disturbance or floristic quality in an area is the calculated Native Floristic Quality Index (Native FQI). A high Native FQI value indicates a high-quality natural area, but how high the Native FQI must be for an area to be of high quality is a subjective determination. In general, a wetland (or other defined area) with a Native FQI greater than 20.00 from a single observation may be considered a moderately high quality plant community. These areas have a high potential for containing more conservative or high-quality plant species. Therefore, adverse impacts to such areas, especially wetlands and subsequent proposals for compensatory mitigation, may be scrutinized carefully by the regulatory agencies.

A high number of native species with high coefficients of conservatism “C” (a subjective measure of quality based on habitat specificity and relative tolerance to disturbance; weedy species are highly disturbance tolerant, and are ranked lower) will result in a high Native FQI. The C value is based on the relative rarity of a species and/or the resiliency of a species following disturbance. Coefficients of conservatism for native plant species range from 0 for common, weedy species to 10 for rare, highly conservative species. Adventive species are not assigned a C value. Adventive species are non-native species that have entered the Chicago region since European settlement. These species generally do not lend themselves to increased floristic quality, but instead appear after a disturbance. Thus, a high proportion of these species in a given area or community may be an indication of a lower quality plant community.

The wetness coefficient (W, ranging from -5 to +5) refers to the corresponding wetland indicator status (e.g., OBL = obligate wetland species, -5; FAC = facultative species, 0; UPL = upland species, +5) for U.S. Fish and Wildlife Service Region 3 (Illinois, Michigan, Indiana, Missouri, Iowa, Wisconsin, and Minnesota). A wetland indicator status noted in brackets (e.g., [FACW]) is a modification of the Region 3 indicator status to apply locally in the 22-county Chicago region covered by *Plants of the Chicago Region*. The Wetness coefficient is useful in evaluating the general “wetness” affinity of a sampled plant community. If the average indicator status among all species present is in the FAC, FACW, or OBL classes, then the plant community may be considered hydrophytic.

HIGH QUALITY AQUATIC RESOURCES

U.S. Army Corps of Engineers, Chicago District Regional Permit Program

High Quality Aquatic Resources (HQARs) include Advanced Identification (ADID) sites (mapped in Kane, Lake and McHenry Counties), bogs, dune and swale complexes, ephemeral pools, fens, forested wetlands, sedge meadows, seeps, streams rated Class A or B in the Illinois Biological Stream Characterization study, wet prairies, wetlands supporting Federal or Illinois endangered or threatened species, and wetlands with a floristic quality index of 20 or greater, or mean C-value of 3.5 or greater. These definitions are listed below. If a given wetland meets one or more of these definitions, that wetland is considered a HQAR and a Category II Regional Permit or Individual Permit is required.

Advanced Identification (ADID) sites: Aquatic sites that have been identified by the Chicago District and U.S. Environmental Protection Agency, in advance of specific permit requests, as areas generally unsuitable for the disposal of dredged or fill material, because of a variety of factors, including high floristic values, water quality or storage functions, or similar wetland functions performed at elevated levels. ADID sites include various Waters of the U.S., including wetlands. An ADID map for the subject property is included with this report as Figure 3.

Bog: A low nutrient peatland, usually in a glacial depression, that is acidic in the surface stratum and often dominated at least in part by the genus *Sphagnum*.

Dune and Swale Complex: Areas usually parallel to the Lake Michigan shoreline and typified by sandy, linear, upland ridges alternating with low-relief wetland created over time during changes in the Lake Michigan's water levels.

Ephemeral pool: A seasonally inundated depression within a forested wetland or upland community, usually located on a moraine, glacial outwash plain, or in an area shallow to bedrock; also known locally as a "vernal pool." These areas may not be permanently vegetated.

Fen: A peatland, herbaceous (including calcareous floating mats) or wooded, with calcareous groundwater flow.

Forested wetland: A wetland dominated by native woody vegetation with at least one of the following species or genera present: *Carya* spp., *Cephalanthus occidentalis*, *Cornus alternifolia*, *Fraxinus nigra*, *Juglans cinerea*, *Nyssa sylvatica*, *Quercus* spp., *Thuja occidentalis*, *Betula nigra*, *Betula alleghaniensis*, *Betula papyrifera*, *Fagus grandifolia*.

Sedge meadow: A wetland dominated by at least one of the following genera: *Carex*, *Calamagrostis*, *Cladium*, *Deschampsia*, *Eleocharis*, *Rynchospora*, *Scleria*, or *Eriophorum*.

Seep: A wetland, herbaceous or wooded, with saturated soil or inundation resulting from the diffuse flow of groundwater to the surface stratum. [Seeps typically occur on slopes because of blocked vertical infiltration.]

Streams rated A or B in the Illinois Biological Stream Characterization study: The historical Class A and B rating system was replaced with the new Illinois Department of Natural Resources stream classification system that can be found at:

<https://www.dnr.illinois.gov/conservation/BiologicalStreamratings/Pages/default.aspx>

Wet prairie: A wetland dominated by native graminoid species with a diverse indigenous forb component that is seasonally saturated and/or temporarily inundated and may resemble a fen in its best development. Species found in a high quality wet prairie include at least one of the following: *Calamagrostis canadensis*, *Spartina pectinata*, *Aster puniceus firmus*, *Beckmannia syzigachne*, *Chelone glabra*, *Eleocharis wolfii*, *Lysimachia quadrifolia*, *Oenothera perennis*, *Oenothera pilosella*, *Pedicularis lanceolata*, and *Solidago ohioensis*.

Wetlands Supporting Federal or Illinois Endangered or Threatened Species: An Agency Action Report is routinely requested from the Illinois Department of Natural Resources (IDNR) and from the U.S. Fish and Wildlife Service (USFWS) for wetland delineations. These reports indicate the likelihood of listed species (that is, those species considered legally protected as threatened or endangered) being found near or on a subject property, or possible encroachment into protected natural area reserves. If a listed species record is indicated for the site, an endangered and threatened species investigation may be required to evaluate the actual presence or absence of the species in question. This inquiry is preliminary and does not preclude the presence of otherwise unrecorded listed species.

Wetlands with a Floristic Quality Index of 20 or greater or a mean C-value of 3.5 or greater: Plant species inventories collected during wetland delineations are used to generate floristic quality values using the Floristic Quality Assessment method published in *Plants of the Chicago Region* (Swink and Wilhelm, 1994). These tables are included in this report for each of the areas identified as wetland.

STREAM CLASSIFICATION
WITHIN THE CHICAGO DISTRICT

The historical Class A and B rating system was replaced with the new Illinois Department of Natural Resources stream classification system that can be found at:

<https://www.dnr.illinois.gov/conservation/BiologicalStreamratings/Pages/default.aspx>

APPENDIX V
THREATENED AND ENDANGERED SPECIES
REVIEW

Applicant: V3 Companies
Contact: Alicia Metzger
Address: 7325 Janes Ave.
Woodridge, IL 60517

IDNR Project Number: 2003204
Date: 09/26/2019
Alternate Number: 19381

Project: Terrace Hill
Address: 4015 W Algonquin Road, Algonquin

Description: The project proposes to redevelop the existing golf course into a residential subdivision.

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Exner Marsh INAI Site
Exner Marsh Nature Preserve
Black-Crowned Night Heron (*Nycticorax nycticorax*)
Blanding's Turtle (*Emydoidea blandingii*)
Common Moorhen (*Gallinula chloropus*)
Least Bittern (*Ixobrychus exilis*)
Yellow-Headed Blackbird (*Xanthocephalus xanthocephalus*)

An IDNR staff member will evaluate this information and contact you to request additional information or to terminate consultation if adverse effects are unlikely.

Location

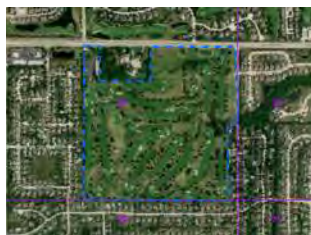
The applicant is responsible for the accuracy of the location submitted for the project.

County: McHenry

Township, Range, Section:

43N, 7E, 25

43N, 7E, 36



IL Department of Natural Resources

Contact

Brian Willard
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction

IL Environmental Protection Agency
Bureau of Water Quality
1021 N Grand Ave East
PO Box 19276
Springfield, Illinois 62794

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

Terms of Use

By using this website, you acknowledge that you have read and agree to these terms. These terms may be revised by IDNR as necessary. If you continue to use the EcoCAT application after we post changes to these terms, it will mean that you accept such changes. If at any time you do not accept the Terms of Use, you may not continue to use the website.

1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.
2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.
3. IDNR reserves the right to enhance, modify, alter, or suspend the website at any time without notice, or to terminate or restrict access.

Security

EcoCAT operates on a state of Illinois computer system. We may use software to monitor traffic and to identify unauthorized attempts to upload, download, or change information, to cause harm or otherwise to damage this site. Unauthorized attempts to upload, download, or change information on this server is strictly prohibited by law.

Unauthorized use, tampering with or modification of this system, including supporting hardware or software, may subject the violator to criminal and civil penalties. In the event of unauthorized intrusion, all relevant information regarding possible violation of law may be provided to law enforcement officials.

Privacy

EcoCAT generates a public record subject to disclosure under the Freedom of Information Act. Otherwise, IDNR uses the information submitted to EcoCAT solely for internal tracking purposes.



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

JB Pritzker, Governor

Colleen Callahan, Director

October 04, 2019

Alicia Metzger
V3 Companies
7325 Janes Ave.
Woodridge, IL 60517

RE: Terrace Hill
Project Number(s): 2003204 [19381]
County: McHenry

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Brian Willard
Division of Ecosystems and Environment
217-785-5500

U.S. FISH AND WILDLIFE SERVICE: SECTION 7 CONSULTATION

Project: Terrace Hill, Algonquin, McHenry County, Illinois (#19381)

Analysis conducted by: Alicia Metzger, V3 Companies, September 26, 2019

Site Description: The subject property consists of a golf course. The surrounding area is developed with residential subdivisions.

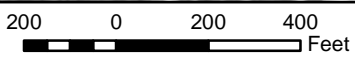
SPECIES	STATUS	HABITAT	SUITABLE HABITAT PRESENT?	CONCLUSION
Eastern prairie fringed orchid (<i>Platanthera leucophaea</i>)	Threatened	Mesic prairies to wetlands such as sedge meadows, marsh edges, and bogs with full sun and little or no woody encroachment.	No, suitable habitat is not present. The subject property is a maintained golf course.	Species and habitat not present. No further consultation is required.
Prairie bush clover (<i>Lespedeza leptostachya</i>)	Threatened	Dry to mesic prairies with gravelly soils.	No, suitable habitat is not present. The subject property is a maintained golf course.	Species and habitat not present. No further consultation is required.
Northern long-eared bat (<i>Myotis septentrionalis</i>)	Threatened	Small crevices and cavities in caves, mines, and under the bark of dead and live trees.	No, suitable habitat is not present. The subject property is a maintained golf course.	Species and habitat not present. No further consultation is required.
Rusty patched bumble bee (<i>Bombus affinis</i>)	Endangered	Grasslands with flowering plants from April – October, underground rodent cavities or clumps of grasses above ground as nesting sites and undisturbed soil for hibernating queens to overwinter; High Potential Zones	No, suitable habitat is not present. The subject property is a maintained golf course.	Species and habitat not present. No further consultation is required.


Conclusion: Species and critical habitat are not present. No further consultation is required.

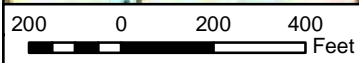
APPENDIX VI
HISTORICAL SITE INFORMATION




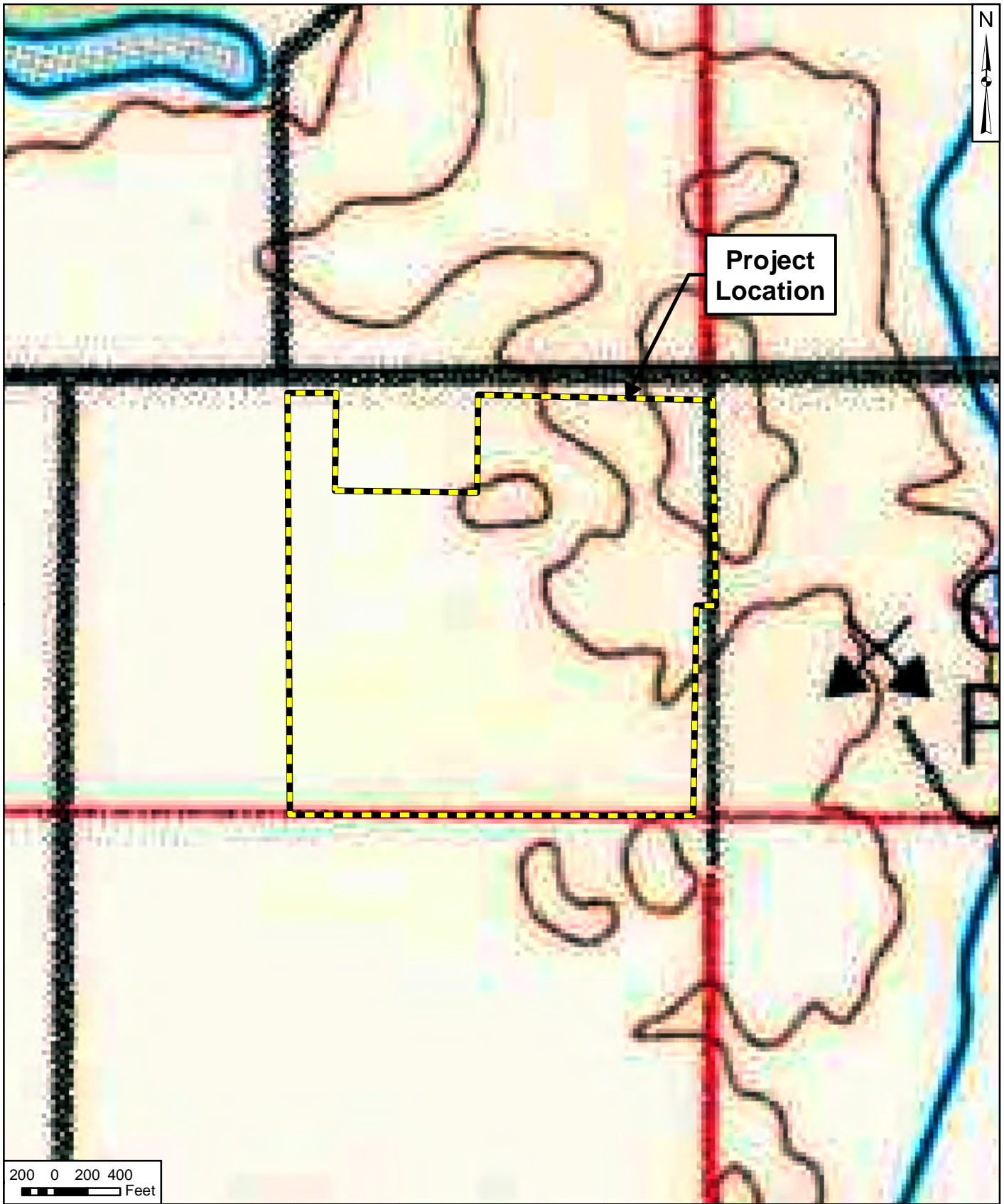
Project Location



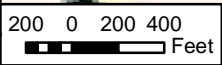
 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	<p>PROJECT NO.: 19381</p>	<p>CLIENT: Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173</p>	<p>TITLE: HISTORICAL AERIAL IMAGERY (1939) MAP</p>	
	<p>CREATED BY: AMM</p>	<p>DATE: 11/20/2019</p>	<p>BASE LAYER: ISGS Historical Aerial Imagery (1939)</p>	<p>SITE: Terrace Hill Algonquin, Illinois</p>
<p>Visio, Vertere, Virtute... "The Vision To Transform with Excellence"</p>	<p>SCALE: See Scale Bar</p>			




 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	<p>PROJECT NO.: 19381</p>	<p>CLIENT: Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173</p>	<p>TITLE: HISTORICAL TOPOGRAPHIC (1962) MAP</p>	
	<p>CREATED BY: AMM</p>	<p>DATE: 11/20/2019</p>	<p>BASE LAYER: USGS Topographic Map Crystal Lake Quadrangle (1962)</p>	<p>SITE: Terrace Hill Algonquin, Illinois</p>
<p>Visio, Vertere, Virtute... "The Vision To Transform with Excellence"</p>	<p>SCALE: See Scale Bar</p>			




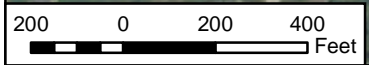
Project Location




 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	<p>PROJECT NO.: 19381</p>	<p>CLIENT: Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173</p>	<p>TITLE: HISTORICAL TOPOGRAPHIC (1981) MAP</p>	
	<p>CREATED BY: AMM</p>	<p>DATE: 09/26/2019</p>	<p>BASE LAYER: USGS Topographic Map Elgin Quadrangle (1981)</p>	<p>SITE: Terrace Hill Algonquin, Illinois</p>
<p>Visio, Vertere, Virtute... "The Vision To Transform with Excellence"</p>	<p>SCALE: See Scale Bar</p>			



 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	<p>PROJECT NO.: 19381</p>	<p>CLIENT: Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173</p>	<p>TITLE: HISTORICAL AERIAL IMAGERY (1998) MAP</p>	
	<p>CREATED BY: AMM</p>	<p>DATE: 11/20/2019</p>	<p>BASE LAYER: NAPP Aerial Imagery (1998)</p>	<p>SITE: Terrace Hill Algonquin, Illinois</p>
<p>Visio, Vertere, Virtute... "The Vision To Transform with Excellence"</p>	<p>SCALE: See Scale Bar</p>			



 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	PROJECT NO.: 19381	CLIENT: Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173	TITLE: HISTORICAL AERIAL IMAGERY (2009) MAP	
	CREATED BY: AMM	DATE: 11/20/2019	BASE LAYER: NAIP Aerial Imagery (2009)	SITE: Terrace Hill Algonquin, Illinois
Visio, Vertere, Virtute... "The Vision To Transform with Excellence"	SCALE: See Scale Bar			

APPENDIX VII
JURISDICTIONAL DETERMINATION



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
CHICAGO DISTRICT, CORPS OF ENGINEERS
231 SOUTH LASALLE STREET
CHICAGO, ILLINOIS 60604-1437

April 8, 2020

Operations Division
Regulatory Branch
LRC-2019-00861

SUBJECT: Jurisdictional Determination for the 137 Acre Terrace Hill Golf Course Project
Located in Algonquin, McHenry County, Illinois (Latitude 42.172182, Longitude -88.359735)

Charles Zange
P.O. Box 7777
Algonquin, Illinois 60102

Dear Mr. Zange:

This is in response to your request that the U.S. Army Corps of Engineers complete a jurisdictional determination for the above-referenced site submitted on your behalf by V3 Companies. The subject project has been assigned number LRC-2019-00861. Please reference this number in all future correspondence concerning this project.

Following a review of the information you submitted, this office has determined that the subject property contains "waters of the United States".

Areas 8 & 9 have been determined to be under the jurisdiction of this office and therefore, subject to Federal regulation.

Areas 1-7 & 10-16 are water features Exempt from Federal regulation. Please be informed that this office does not concur with the boundaries of waters not subject to Federal regulation.

In the event an application is submitted for work within jurisdictional areas, a concurrence of the wetland boundaries and/or a professional survey of the identified wetland and water features stamped by a professional surveyor will need to be prepared and shall accompany the approved wetland delineation.

For a detailed description of our determination please refer to the enclosed decision document. This determination covers only your project as depicted in the Wetland Delineation Report dated October 2, 2019, prepared by V3 Companies.

This determination is valid for a period of five (5) years from the date of the letter, unless new information warrants revision of the determination before the expiration date or a District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

This letter is considered an approved jurisdictional determination for your subject site. If you object to this determination, you may appeal, according to 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and a Request for Appeal (RFA) form. If you request to appeal the above determination, you must submit a completed RFA form to the Great Lakes/Ohio River Division Office at the following address:

Jacob Siegrist
Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10-714
Cincinnati, Ohio 45202-3222
Phone: (513) 684-2699 Fax: (513) 684-2460

In order to be accepted, your RFA must be complete, meet the criteria for appeal and be received by the Division Office within sixty (60) days of the date of the NAP. If you concur with the determination in this letter, submittal of the RFA form to the Division office is not necessary.

This determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

It is your responsibility to obtain any required state, county, or local approvals for impacts to wetland areas not under the Department of the Army jurisdiction. Please note that the McHenry County Ordinance regulates isolated waters of McHenry County that are not under the jurisdiction of the U.S. Army Corps of Commanders. For projects in incorporated areas of McHenry County, contact the certified community for information related to the ordinance. For projects in unincorporated areas of McHenry County, contact the McHenry County Department of Planning and Development at (815) 334-4560.

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers regulates the discharge of dredged or fill material into waters of the United States, including wetlands. A Department of the Army permit is required for any proposed work involving the discharge of dredged or fill material within the jurisdiction of this office. To initiate the permit process, please submit a joint permit application form along with detailed plans of the proposed work. Information concerning our program, including the application form and an application checklist, can be found at and downloaded from our website:

<http://www.lrc.usace.army.mil/Missions/Regulatory.aspx>

If you have any questions, please contact Mr. Michael J. Machalek of my staff by telephone at (312) 846-5534 or email at Mike.J.Machalek@usace.army.mil.

Sincerely,

Diedra L. McLaurin
Team Leader, West Section
Regulatory Branch

Enclosures

Copy Furnished w/out Enclosures

McHenry County Department of Planning and Development (Joanna Colletti)
V3 Companies (Scott Brejcha)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Charles Zange

File Number: LRC-2019-00861

Date: April 8, 2020

Attached is:

See Section below

	INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A. INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit or a Letter of Permission (LOP), you may sign the permit document and return it to the district commander for final authorization. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district commander. Your objections must be received by the district commander within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district commander will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district commander will send you a proffered permit for your reconsideration, as indicated in Section B below.

B. PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit or a Letter of Permission (LOP), you may sign the permit document and return it to the district commander for final authorization. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

C. PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

D. APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

E. PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Regulatory Branch
Chicago District Corps of Engineers
231 South LaSalle Street, Suite 1500
Chicago, IL 60604-1437
Phone: (312) 846-5530
Fax: (312) 353-4110

If you only have questions regarding the appeal process you may also contact:

Jacob Siegrist
Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10524
Cincinnati, Ohio 45202-3222
Phone: (513) 684-2699 Fax: (513) 684-2460

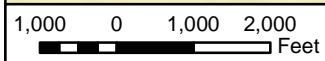
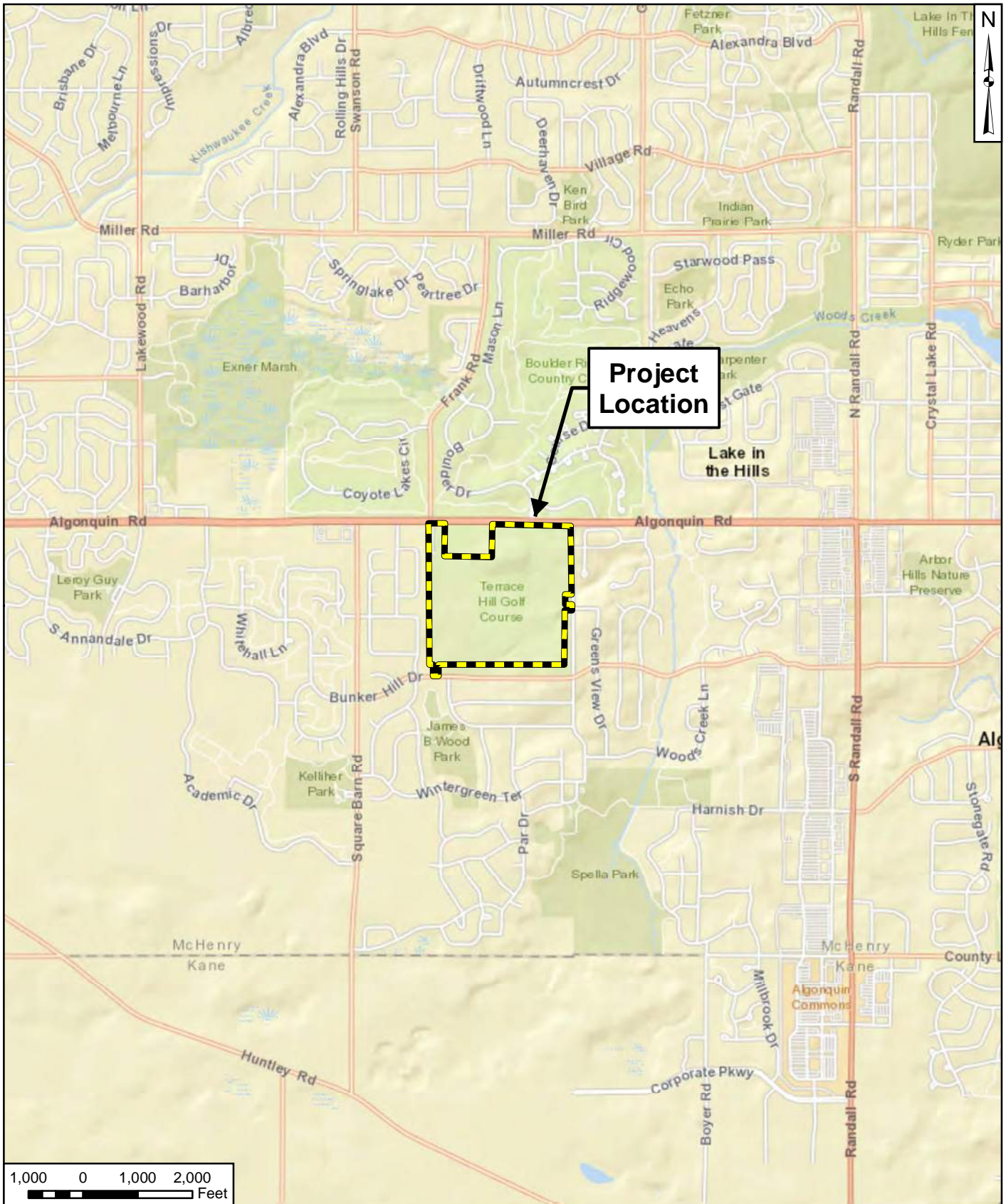
RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Commanders personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.


Signature of appellant or agent.

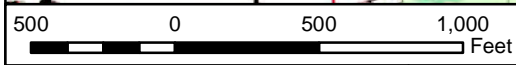
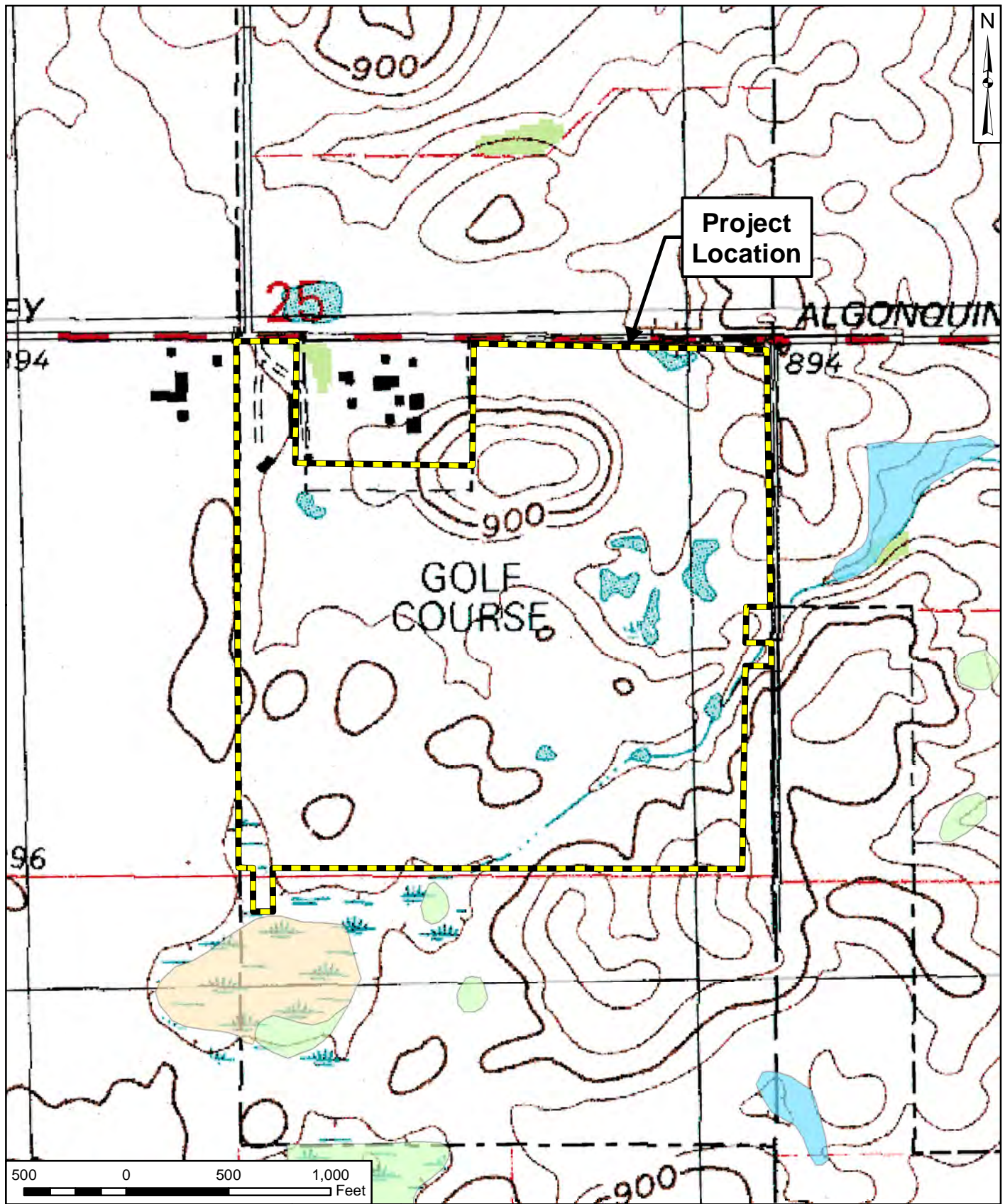
Date:

Telephone number:

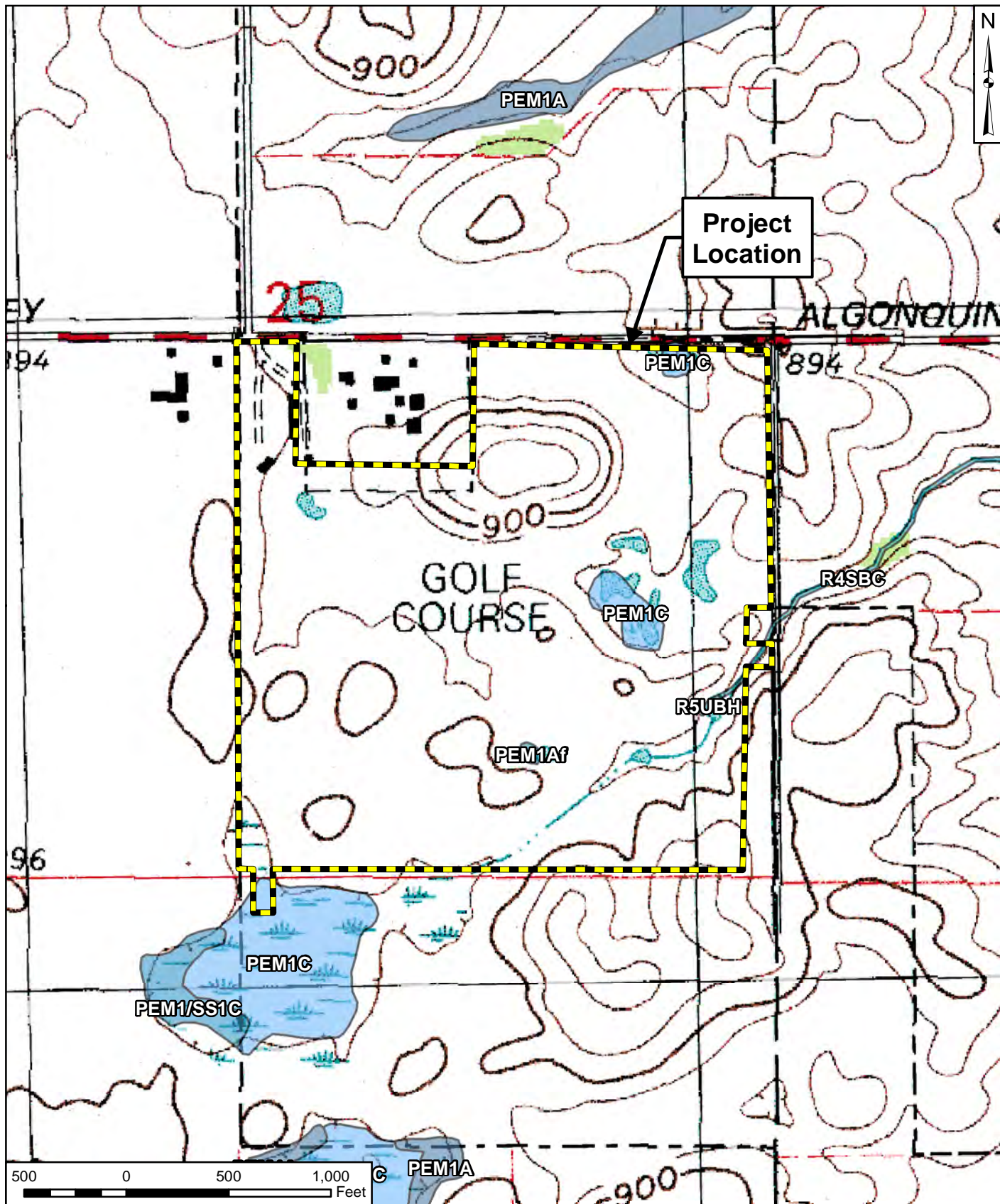
FIGURES




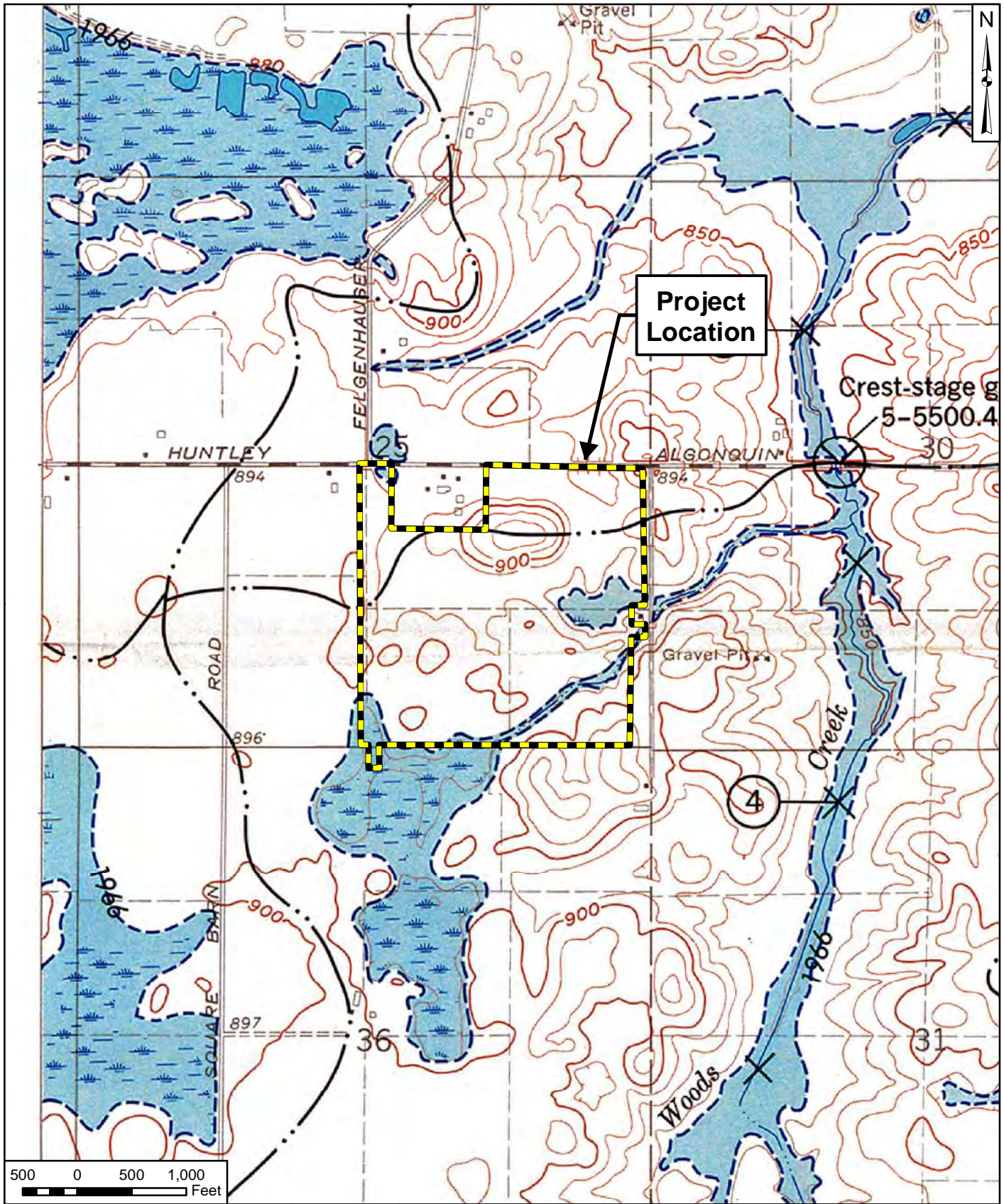
 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	<p>PROJECT NO.: 19381</p>	<p>CLIENT: Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173</p>	<p>TITLE: PROJECT LOCATION MAP</p>	
	<p>CREATED BY: AMM</p>	<p>DATE: 11/20/2019</p>	<p>BASE LAYER: ESRI World Street Map</p>	<p>SITE: Terrace Hill Algonquin, Illinois</p>
<p>Visio, Vertere, Virtute... "The Vision To Transform with Excellence"</p>	<p>SCALE: See Scale Bar</p>			



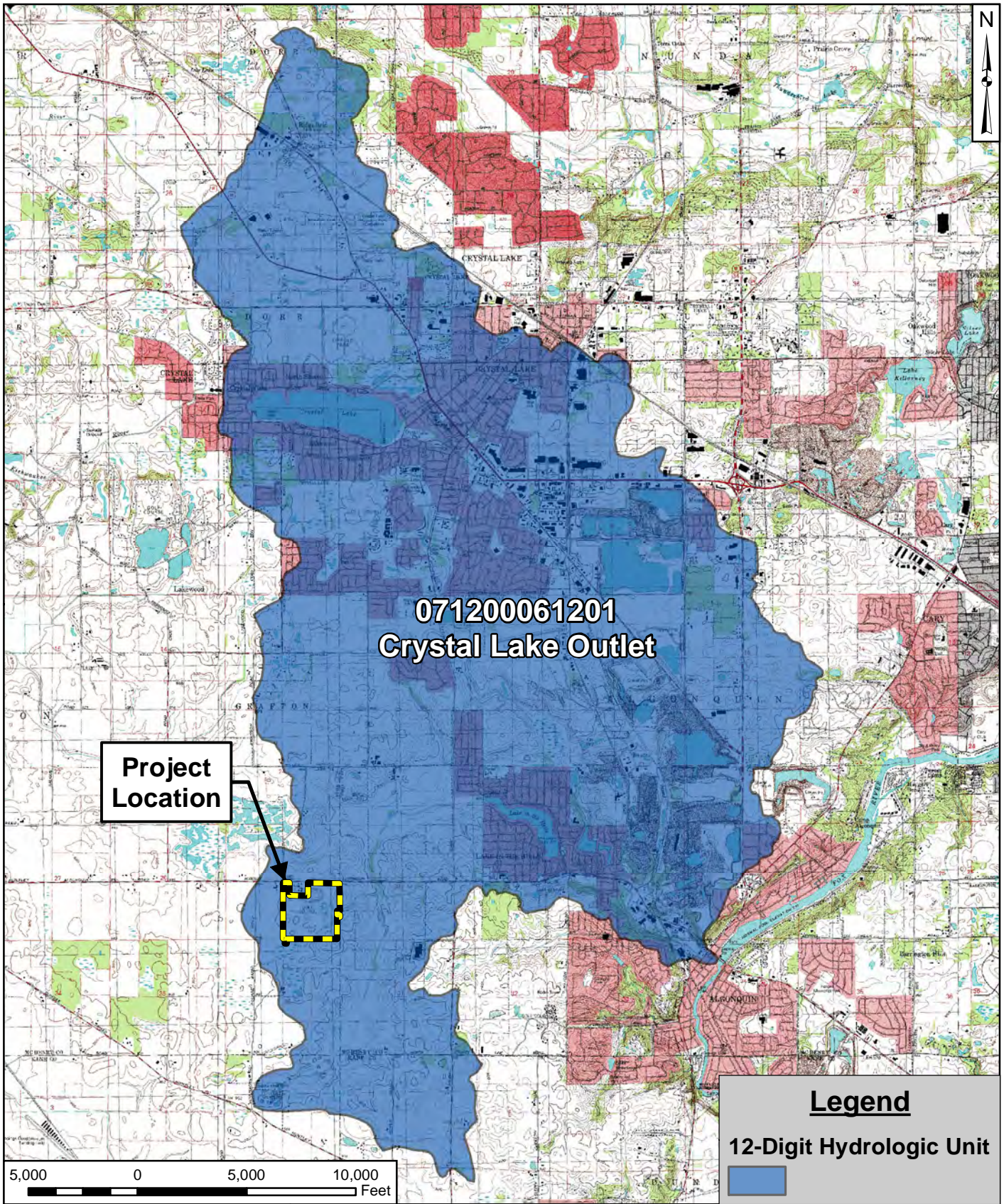
 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	<p>PROJECT NO.: 19381</p>	<p>CLIENT: Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173</p>	<p>TITLE: MCHENRY COUNTY WETLANDS MAP</p>		
	<p>CREATED BY: AMM</p>	<p>DATE: 11/20/2019</p>	<p>BASE LAYER: USGS Topographic Map Crystal Lake Quadrangle (1998)</p>	<p>SITE: Terrace Hill Algonquin, Illinois</p>	<p>FIGURE: 3</p>
<p>Visio, Vertere, Virtute... "The Vision To Transform with Excellence"</p>		<p>SCALE: See Scale Bar</p>			



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	<p>CREATED BY: AMM</p>	<p>DATE: 11/20/2019</p>	<p>BASE LAYER: USGS Topographic Map Crystal Lake Quadrangle (1998)</p>	<p>SITE: Terrace Hill Algonquin, Illinois</p>
<p>Visio, Vertere, Virtute... "The Vision To Transform with Excellence"</p>	<p>SCALE: See Scale Bar</p>			

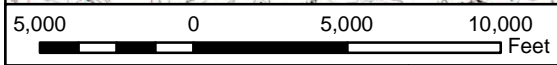


 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	<p>PROJECT NO.: 19381</p>	<p>CLIENT: Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173</p>	<p>TITLE: USGS HYDROLOGIC ATLAS</p>	
	<p>CREATED BY: AMM</p>	<p>DATE: 11/20/2019</p>	<p>BASE LAYER: USGS Hydrologic Atlas Crystal Lake Quadrangle (1966)</p>	<p>SITE: Terrace Hill Algonquin, Illinois</p>
<p>Visio, Vertere, Virtute... "The Vision To Transform with Excellence"</p>	<p>SCALE: See Scale Bar</p>			

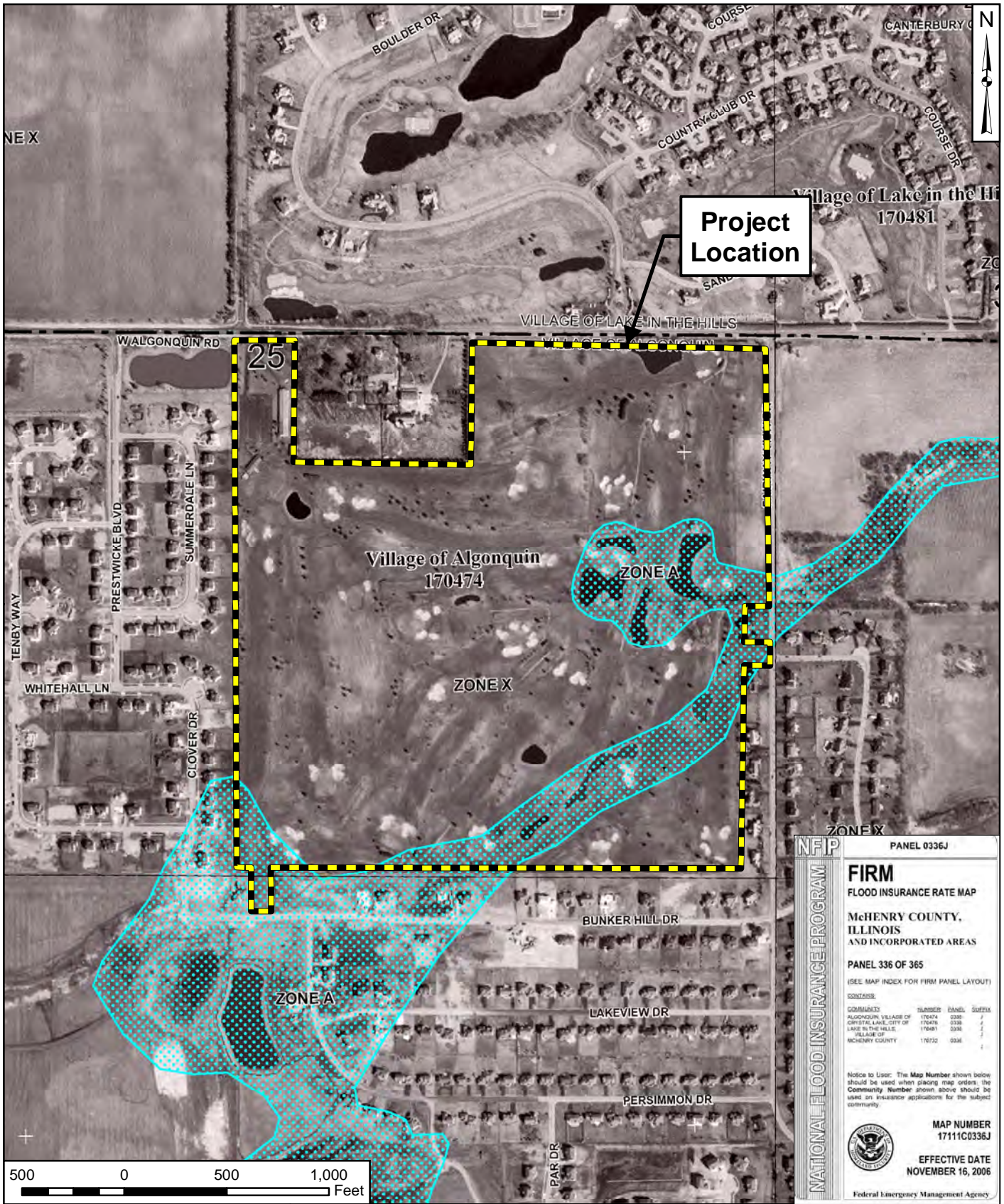


Legend

12-Digit Hydrologic Unit



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	<p>N:\2019\19381\Drawings\ArcGIS\NR\Wetland\FIG5huc19381.mxd</p>			



NFIP PANEL 0336J

FIRM
FLOOD INSURANCE RATE MAP

McHENRY COUNTY,
ILLINOIS
AND INCORPORATED AREAS

PANEL 336 OF 365

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

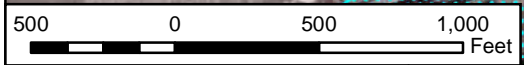
COMMUNITY	NUMBER	PANEL	SUFFIX
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CRYSTAL LAKE, CITY OF	170476	0336	J
LAKE IN THE HILLS, VILLAGE OF	170481	0336	J
McHENRY COUNTY	170732	0336	J

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

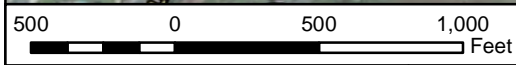
MAP NUMBER
1711C0336J


EFFECTIVE DATE
NOVEMBER 16, 2006

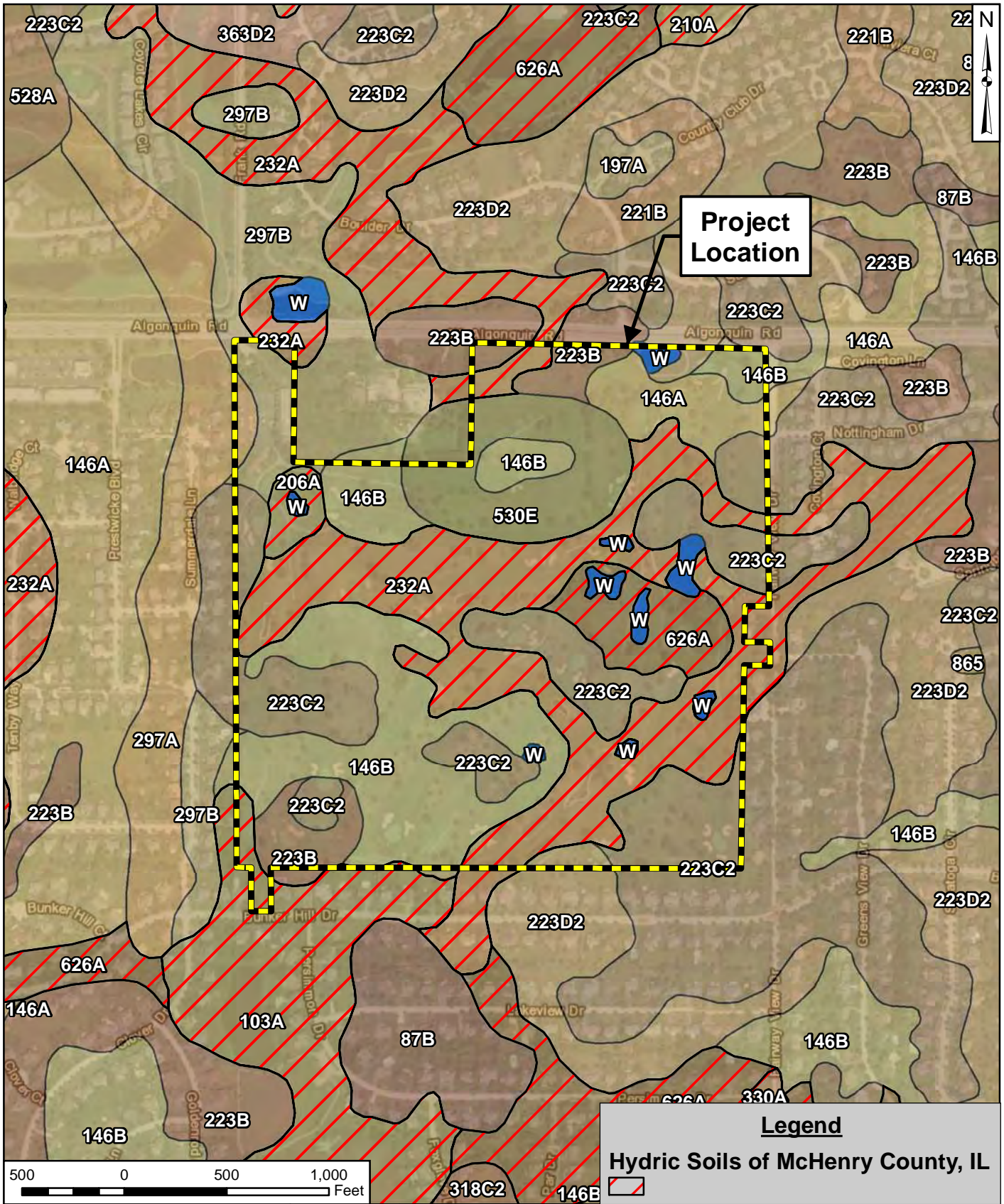
Federal Emergency Management Agency




 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p> <p>Visio, Vertere, Virtute... "The Vision To Transform with Excellence"</p>	PROJECT NO.:	CLIENT:	FEMA FLOOD INSURANCE RATE MAP (FIRM)		FIGURE: 6
	19381	Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173			
	CREATED BY:	BASE LAYER:	Terrace Hill Algonquin, Illinois		
	AMM	FEMA FIRM Panel 1711C0336J			
DATE:	SCALE:				
11/20/2019	See Scale Bar				



 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	PROJECT NO.:	CLIENT:	FLOOD ZONES OF MCHENRY COUNTY, ILLINOIS (2019) MAP	
	19381	Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173		
	CREATED BY:	BASE LAYER:	SITE:	FIGURE:
	AMM	NAIP Aerial Imagery (2017)	Terrace Hill Algonquin, Illinois	7
Visio, Vertere, Virtute... "The Vision To Transform with Excellence"	DATE:	SCALE:		
	11/20/2019	See Scale Bar		



Legend
Hydric Soils of McHenry County, IL

 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	PROJECT NO.: 19381	CLIENT: Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173	SOIL SURVEY OF MCHENRY COUNTY, ILLINOIS MAP	
	CREATED BY: AMM	BASE LAYER: NAIP Aerial Imagery (2017)	Terrace Hill Algonquin, Illinois	8
Visio, Vertere, Virtute... <i>"The Vision To Transform with Excellence"</i>	DATE: 11/20/2019	SCALE: See Scale Bar		




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 Woodridge, IL 60517
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PROJECT NO.:	19381
CREATED BY:	DJJ
DATE:	04/15/2020
SCALE:	See Scale Bar

CLIENT:	Pulte Home Corporation 1900 E. Golf Road, Suite 300 Schaumburg, Illinois 60173
BASE LAYER:	DigitalGlobe Aerial Imagery (2017)

TITLE:	WETLAND DELINEATION MAP
SITE:	Terrace Hill Algonquin, Illinois

FIGURE:	9
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APPENDIX 4

THREATENED & ENDANGERED
SPECIES & SHPO/IHPA CONSULTATION



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

JB Pritzker, Governor

Colleen Callahan, Director

October 04, 2019

Alicia Metzger
V3 Companies
7325 Janes Ave.
Woodridge, IL 60517

RE: Terrace Hill
Project Number(s): 2003204 [19381]
County: McHenry

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Brian Willard
Division of Ecosystems and Environment
217-785-5500

U.S. FISH AND WILDLIFE SERVICE: SECTION 7 CONSULTATION

Project: Terrace Hill, Algonquin, McHenry County, Illinois (#19381)

Analysis conducted by: Alicia Metzger, V3 Companies, September 26, 2019

Site Description: The subject property consists of a golf course. The surrounding area is developed with residential subdivisions.

SPECIES	STATUS	HABITAT	SUITABLE HABITAT PRESENT?	CONCLUSION
Eastern prairie fringed orchid (<i>Platanthera leucophaea</i>)	Threatened	Mesic prairies to wetlands such as sedge meadows, marsh edges, and bogs with full sun and little or no woody encroachment.	No, suitable habitat is not present. The subject property is a maintained golf course.	Species and habitat not present. No further consultation is required.
Prairie bush clover (<i>Lespedeza leptostachya</i>)	Threatened	Dry to mesic prairies with gravelly soils.	No, suitable habitat is not present. The subject property is a maintained golf course.	Species and habitat not present. No further consultation is required.
Northern long-eared bat (<i>Myotis septentrionalis</i>)	Threatened	Small crevices and cavities in caves, mines, and under the bark of dead and live trees.	No, suitable habitat is not present. The subject property is a maintained golf course.	Species and habitat not present. No further consultation is required.
Rusty patched bumble bee (<i>Bombus affinis</i>)	Endangered	Grasslands with flowering plants from April – October, underground rodent cavities or clumps of grasses above ground as nesting sites and undisturbed soil for hibernating queens to overwinter; High Potential Zones	No, suitable habitat is not present. The subject property is a maintained golf course.	Species and habitat not present. No further consultation is required.

Conclusion: Species and critical habitat are not present. No further consultation is required.



UNIVERSITY OF THE PACIFIC

THE UNIVERSITY OF THE PACIFIC

OFFICE OF THE CHANCELLOR

STOCKTON, CA 95211



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APPENDIX 5

BMP/NATURALIZED BASIN PLANTING PLAN SUMMARY
AND
3-YEAR MANAGEMENT & MONITORING PLAN



**NATIVE BMP & WETLAND
BUFFER PLANTING/
MITIGATION PLAN SUMMARY
AND MANAGEMENT
& MONITORING PLAN**

PROJECT SITE:

The Trails of Woods Creek
Algonquin, McHenry County, Illinois

PREPARED FOR:

Pulte Home Corporation
1900 E. Golf Road
Schaumburg, IL 60173

PREPARED BY:

V3 Companies, Ltd.
7325 Janes Avenue
Woodridge, Illinois 60517
630.724.9200

July 13, 2020

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APPENDICES

- APPENDIX 1 PLANTING PLAN
- APPENDIX 2 NATIVE SEED AND PLUG MIXES
- APPENDIX 3 HYDROGRAPHS



INTRODUCTION

This BMP & Wetland Buffer Mitigation Plan Summary and Management & Monitoring Plan (MMP) has been prepared on behalf of Pulte Home Corporation for the proposed naturalized stormwater management facilities located within the proposed Trails of Woods Creek residential development. The site is located north of Bunker Hill Road, south of Algonquin Road, east of Square Barn Road and west of Greenway View Drive in Algonquin, McHenry County, Illinois (Section 25, T43N, R7E; 41.175332°N, -88.356965 °W; Crystal Lake quadrangle).

The proposed Native Planting Plans for the stormwater management facilities and Waters of the U.S. buffer mitigation basins are provided in Appendix 1 of this MMP document. As shown on these plans, there are nine stormwater management facilities and the associated buffers to Areas 8 and 9 (under the jurisdiction of the USACE) that will be naturalized with prairie vegetation on the slopes and wetland vegetation along the shoreline and shelves. These basins include the following:

SWMF-01 and SWMF-02: These are the largest basins located in the east and southeast portions of the property. These basins will contain a mosaic of emergent, wet meadow and prairie vegetation intermixed with several, isolated open water pockets.

SWMF-03, SWMF-04, SWMF-07, and SWMF-08: These are small basins located in the south and northwest portions of the property. These basins will have one centrally located open water area surrounded by a shelf of wetland vegetation and prairie side-slopes.

SWMF-05, SWMF-06, and SWMF-09: These are moderate size basins located in the central and northeast portions of the property. These basins will have a large, centrally located open water area surrounded by a wetland shelf and prairie side-slopes.

The 50-foot buffer for USACE jurisdictional Areas 8 and 9: Located in the southeast portion of the site, the existing buffers for Areas 8 and 9, which are under the jurisdiction of the USACE Chicago District, consist of mowed turf grass. The proposed buffers of Areas 8 and 9 in the proposed condition will consist of emergent native plants, shoreline native plants, and native upland prairie. The proposed condition will be a drastic improvement to the buffer zones of Areas 8 and 9.

The purpose of establishing native vegetation in these basins is to provide an aesthetically pleasing and environmentally beneficial alternative to riprap and turf grass stormwater areas. Native vegetation aids in sediment and toxicant retention/removal, and provides cover for wildlife. Besides providing cover and a food source for wildlife, prairie vegetation greatly reduces or eliminates the need for irrigation, aeration, fertilization, and use of many chemicals (i.e. herbicides, fungicides, etc.) typically required by maintained turf grass. Prairie vegetation also provides better soil stabilization than turf grass (i.e., bluegrass, etc.) due to extensive root systems, many reaching depths of ten feet below the soil surface. These extensive root systems allow prairie vegetation to withstand drought and nutrient deficiencies in the soil. The extensive root systems also allow rainwater to percolate into the soil, aiding in groundwater recharge, instead of direct runoff typical of conventional basin designs.



CONSTRUCTION AND PLANTING

This section of the plan details construction and revegetation of the naturalized basin areas.

CONSTRUCTION, SOILS AND TOPDRESSING SPECIFICATIONS

Grading and excavation of the proposed naturalized basins will be completed in accordance with the engineering plans in order to achieve the goals of the project.

The following specifications will be followed to minimize impacts to the ground surface during the excavation and grading activities to provide a suitable medium for the vegetation establishment.

1. All areas to be planted or seeded with native vegetation will be over-excavated a minimum of 1-foot below final grade to allow for the placement of top dress material, unless a one-foot thick topsoil layer is present following excavation to proposed final grade.
2. On-site topsoil can be used for top dress material. If additional topsoil is required from an off-site location, these soils shall contain an organic matter content of 3% or more and a clay content of 27% or less.
3. Wheel-based vehicles (scrapers, end loaders, etc.) shall not be used for topdressing work. Only low ground pressure wide-track equipment (quadtrack tractor, wide track dozer, backhoe, or approved by Engineer) shall haul, move and spread top dress material.
4. Following the 1-foot of top dress placement, the surface shall be thoroughly disked using a small farm type disc (not a large construction disc) or Harley raked. Top dress material shall not be handled or the surface disked when wet.
5. No wheeled traffic shall occur in the area after the final disking is complete, with the exception of a small farm type tractor if used for seeding.
6. All construction activities must be done under dry conditions.
7. All trash, construction debris, sticks, roots, rocks, and other deleterious materials shall be removed prior to seeding and planting.

SEEDING SPECIFICATIONS

1. The seeding contractor shall furnish, transport, and install the native seed mixes as specified for the respective areas shown on the planting plan.
2. Seeding activities of the permanent matrices shall be performed after the seed bed has been properly prepared between November 1 after the first frost and ending when snow cover exceeds 2-inches in depth or areas are covered with ice and June 1 of the following year
3. If construction activities are finished outside the permanent seeding window, the area can be stabilized with a temporary cover crop or permanent seeded with a supplemental seeding during the prescribed window the following year.
4. Seed shall be surface sown with a broadcast or native drill seeder.
5. All seed sources shall be within a 200-mile radius of the project site and be true to name and



- variety.
6. Seeding shall only occur in areas that will receive erosion blanket installation on the same day (see section below).

EROSION CONTROL BLANKET INSTALLATION SPECIFICATIONS

North American Green (NAG) S75BN BioNet shall be installed over the entire mesic prairie and wet meadow areas following seeding (and before plant plugs are installed in the wet meadow) as shown on the planting plan. The blanket shall be installed on the same day as seeding, so no seeded area remains unprotected for more than 8 hours. Therefore, the area seeded per day shall be based on whatever can be blanketed on that same day. The blanket shall be installed and secured with 6-inch wire staples following the manufacture's specifications.

PLUG INSTALLATION SPECIFICATIONS

1. The planting contractor shall furnish, transport and install all container grown plants for all planting zones as specified on plans.
2. Herbaceous planting activities shall be performed no earlier than May 15th and no later than July 1st under favorable conditions (i.e., proper hydrology).
3. All plugs shall be container grown in open bottom pots with the following minimum dimensions: 2 3/8 inches square by 3-inches deep or a minimum root area of 11 cubic inches. At time of planting, all plant plugs shall have minimum shoot heights of 12-inches and well-developed root systems that hold planting soil together when removed from the container. Soil saturation shall be maintained for all container plants until installation.
4. Plant material shall not be provided as dormant (i.e., sprouted tubers, sprouted rhizomes or bare root) unless specified in the planting plan.

PLANTING ZONES

The hydrographs provided in Appendix 3 show typical draw down times for all the detention basins. The proposed plant communities for each basin are based on the information provided in the hydrographs and basins grading. The Native Planting Plan is provided in Appendix I, which shows the locations of the proposed plant communities for all nine basins. The proposed plant mixes for the basins and the buffer enhancement of Areas 8 and 9 are provided in Appendix 2, and are discussed individually below.

Emergent Plug Mix. The emergent plug mix will be installed in the basins in the areas shown on the Native Planting Plan and they range from a narrow perimeter shelf to a more extensive zone as dictated by the proposed grading. The emergent zone is proposed in areas that will have shallow inundation for the majority of the growing season, which is predicted to occur between the basins NWL and 1-foot below the NWL. A total of 5,000 emergent plant plugs will be installed per acre within this zone under suitable hydrologic conditions during spring (May 15 – July 1).

Wet Meadow Seed and Plug Mix. The Wet Meadow Seed and Plug Mix will be installed in the basins in the areas shown on the Native Planting Plan. This mix is proposed in areas that will have temporary inundation following storm events followed by long-term soil saturation. For the most part, these



areas are proposed between the NWL and 1-foot above the NWL of certain basins. A total of 3,000 wetland plant plugs will be installed per acre as well as a diverse seed mix to ensure thorough vegetation establishment within this zone. The plant plugs will be installed after the seed and blanket installation.

Pickerel Weed Plug Zone. Pickerel weed plants are proposed to surround all deep-water pockets in approximately 9 to 12 inches of water depth under normal conditions. Pickerel weed will be installed ~10-foot on center for all areas identified on the Native Planting Plan.

Shoreline Plug Mix Zone. Wetland plugs (Shoreline Plug Mix) will also be installed around the shoreline of the naturalized basins that do not have a wet meadow zone proposed. The shoreline plug mix will provide additional shoreline stabilization in these basins. Plant plugs in the Shoreline Plug Mix shall be installed after the prairie has been seeded and blanket has been installed. Plant plugs for the Shoreline Plug Mix shall be established on the toe slope in two rows parallel to the entire shoreline into the erosion control blanket. Plugs in the “Shoreline Row” shall be established in one row parallel with the shoreline with plugs ~2-foot on center at the NWL elevation. Plugs in the “Upper Shoreline Row” shall be established in one row parallel with the shoreline with plugs ~2-foot on center on the slope 2.0 horizontal feet above the “Shoreline Row”.

Mesic Prairie Seed Mix. A Mesic Prairie Seed Mix, a mix that contains native grasses, sedges and forbs, will be installed on all the slopes of the basins as specified on the planting plan. Following seeding activities, a biodegradable erosion blanket (i.e. North American Green S75BN) will be installed to stabilize the seed prior to cover crop germination and establishment of the permanent prairie community.

PREDATOR CONTROL

A predator control system shall be installed to help achieve the site goals and performance standards by discouraging herbivores such as but not limited to geese, ducks and muskrats from consuming and uprooting newly planted native plugs.

1. The materials shall include: 1-inch X 1-inch X 4-foot wood stakes with one end pointed, chicken wire fencing fabric or wire hardware cloth with mesh openings not to exceed 2-inches, 6-inch wire landscape staples, and UV rated zip ties.
2. All areas to be plugged shall be protected by predator fencing. The fence, consisting of three-foot-high chicken wire fence mounted securely on 1-inch X 1-inch X 4-foot wood stakes in such a manner that one foot of wood stake with pointed end will extend below the fence fabric. The wood stakes will be no greater than 9 feet apart and installed approximately one foot deep into the soil so that the bottom of the fence fabric rests firmly on the soil surface. This fence shall be installed in conjunction with site seeding and native plug installation.



MANAGEMENT & MONITORING PLAN

This MMP for The Trails of Woods Creek establishes a means by which the native areas may be evaluated relative to pre-established goals and performance standards.

The duration of the monitoring program is three years, beginning with the completion of grading and planting. The three-year management and monitoring program will be the responsibility of Pulte Home Corporation.

VEGETATION MANAGEMENT

Proper management is critical for successful establishment of the proposed native plantings and achievement of the performance standards. Periodic mowing/weed whipping, selective herbicide application and prescribed burning are commonly used as management techniques for natural plant communities.

The invasive species that require control include, but are not limited to, the following species provided in Table 1.

Table 1: Non-Native and Invasive Species
American Silver-Berry (<i>Elaeagnus commutata</i>)
Asian Bittersweet (<i>Celastrus orbiculatus</i>)
Garden Bird's-Foot-Trefoil (<i>Lotus corniculatus</i>)
Black Locust (<i>Robinia pseudoacacia</i>)
Bull Thistle (<i>Cirsium vulgare</i>)
Lesser Burrdock (<i>Arctium minus</i>)
Canadian Goldenrod (<i>Solidago canadensis</i>)
Canadian Thistle (<i>Cirsium arvense</i>)
Cat-Tail (<i>Typha</i> spp.)
Chinese Yam (<i>Discorea oppositifolia</i>)
Common Reed (<i>Phragmites australis</i>)
Crack Willow (<i>Salix fragilis</i>)
Creeping-Jenny (<i>Lysimachia nummularia</i>)
Crownvetch (<i>Securigera varia</i>)
Curly Pondweed (<i>Potamogeton crispus</i>)
Dames Rocket (<i>Hesperis matronalis</i>)
Eurasian-Buttercup (<i>Ficaria verna</i>)
Eurasian Water-Milfoil (<i>Myriophyllum spicatum</i>)
European Barberry (<i>Berberis vulgaris</i>)
European Buckthorn (<i>Rhamnus cathartica</i>)



Garlic-Mustard (<i>Alliaria petiolata</i>)
Giant Hogweed (<i>Heracleum mantegazzianum</i>)
Glossy False Buckthorn (<i>Frangula alnus</i>)
Greater Flowering-Rush (<i>Butomus umbellatus</i>)
Japanese Barberry (<i>Berberis thunbergii</i>)
Japanese Bristle Grass (<i>Setaria faberi</i>)
Japanese Honeysuckle (<i>Lonicera japonica</i>)
Japanese Hop (<i>Humulus japonica</i>)
Japanese-Knotweed (<i>Reynoutria japonica</i>)
Japanese Stilt Grass (<i>Microstegium vimineum</i>)
Jetbead (<i>Rhodotypos scandens</i>)
Leafy Spurge (<i>Euphorbia esula</i>)
Littleleaf Linden (<i>Tilia cordata</i>)
Morrow's Honeysuckle (<i>Lonicera morrowii</i>)
Nodding Plumeless-Thistle (<i>Carduus nutans</i>)
Privet (<i>Ligustrum</i> spp.)
Purple Loosestrife (<i>Lythrum salicaria</i>)
Ragweed (<i>Ambrosia</i> spp.)
Rambler Rose (<i>Rosa multiflora</i>)
Red/White Clover (<i>Trifolium</i> spp.)
Reed Canary Grass (<i>Phalaris arundinacea</i>)
Russian Olive (<i>Elaeagnus angustifolia</i>)
Sandbar Willow (<i>Salix interior</i>)
Seaside Goldenrod (<i>Solidago sempevirens</i>)
Showy Fly-Honeysuckle (<i>Lonicera x bella</i>)
Spotted knapweed (<i>Centaurea stoebe</i> subsp. <i>micranthos</i>)
Tall Goldenrod (<i>Solidago altissima</i>)
Teasel (<i>Dipsacus</i> spp.)
Twinsisters (<i>Lonicera tatarica</i>)
Watercress (<i>Nasturtium officinale</i>)
Wild Parsnip (<i>Pastinaca sativa</i>)
Yellow Sweet-Clover (<i>Melilotus officinalis</i>)



First and Second Year High-Mowing/Weed Whipping. During the first two growing seasons after installing the Prairie/Wet Prairie Mixes on the slopes, mowing or selective weed whipping the vegetation should occur as needed to maintain a plant height of no greater than 18 to 20 inches. To accomplish this, cutting the vegetation to a height of 6 to 9 inches several times during the growing season will be needed. Cutting the vegetation will aid new plant growth as to allow more sunlight to reach young prairie seedlings. Cutting the vegetation will also aid in the control of annual weeds, which can undermine seeding efforts. Selective weed whipping can be used instead of a mower if conditions are unfit (i.e., too wet or no access) for a tractor or if only small, isolated areas of undesirable vegetation require cutting. In addition, cutting the inflorescence prior to seed set of many biennial species including teasel and sweet clover is an effective control method that can be utilized.

Herbicide Application. Management of the vegetation in all areas will include selective application of herbicide to control the invasive and non-native plant species included in Table 1. These species, including others, can displace desirable species, thereby reducing floristic diversity in the naturalized areas. Controlling these species will be required to achieve the performance standards for the project.

Natural regeneration of cattails in the naturalized basins will likely occur following construction. A pre-planting cattail control will be conducted if any cattails are present. Hand pulling cattails can be conducted when the cattails are small enough to ensure that the entire root is removed. Off-site disposal of cattails will be required. Larger cattails will require herbicide applications. Cattail coverage can be no greater than 5% prior to plant installation. Aggressive cattail control will be required after planting throughout the management period to ensure plant establishment. After planting, the hand-wick application method to control cattails will be required.

A determination regarding the type of herbicide to be used should be made when it is known which nuisance species are present on the site. Depending on the target weed species, a selective herbicide may be available. The choice of herbicide and timing of herbicide application will be made by a trained, experienced professional based on the target weed species and conditions.

It is recommended that a minimum of four annual weed control application periods are conducted throughout the three-year period. Below is a general guideline on the suggested schedule and target species for the application periods:

- Application Period One (early spring – April/May): problematic species such as, but not limited to, reed canary grass, garlic mustard, Dame’s rocket, red/white clover, cool season adventive grasses.
- Application Period Two (late spring to early summer – May/June): problematic species such as, but not limited to, teasel, white/yellow sweet clover, thistle, common reed, cattail, and re-sprout control and new seedling growth of buckthorn, honeysuckle, multi-flora rose, privet.
- Application Period Three (mid to late summer – July/August): problematic species such as, but not limited to, ragweed, cattails, purple loosestrife, common reed.
- Application Period Four (late summer and fall – September/October): problematic species such



as, but not limited to, reed canary grass, thistle, common reed, red/white clover, adventive cool season grasses.

Prescribed Burning. Prescribed burning may be conducted in the naturalized areas during the management period. If deemed safe by the contractor, the prescribed burn should be scheduled in the spring or fall of the third growing season. Prescribed burning can reduce exotic weed species that may establish from seeds or rootstock material in the topsoil that is in situ or placed in these areas.

Additionally, burning encourages the growth of native plant species from the established plant mix, and existing seedbank, and inhibits the growth of non-indigenous vegetation.

PERFORMANCE STANDARDS

Performance standards are established for all proposed projects involving naturalized areas so that the relative success may be evaluated. If the performance standards are not achieved by the end of the three-year management and monitoring program, the permittee is responsible for correction of any deficiencies through further management activities, which may include replanting.

1. Within 3 months of seed installation, at least 90% of the mesic prairie zone, as measured by aerial coverage, shall be vegetated. A minimum 90% vegetative coverage shall be maintained throughout, and at the end of, the three-year period for this area.
2. At the end of the third year of the monitoring period, the emergent zone shall achieve a minimum 50% vegetative coverage and the wet meadow zone shall achieve a minimum 80% vegetative coverage.
3. The naturalized basins shall not contain any rills greater than 4 inches wide and 4 inches deep throughout, and at the end, of the three-year period.
4. At the end of the third year of the monitoring period, no area greater than 1.0 square meters in the mesic prairie zone shall be devoid of vegetation.
5. At the end of the third year of the monitoring period, the top three most dominant species based on aerial coverage shall not be non-native species. This standard shall be evaluated separately for each plant community. For the basins that have both a wet meadow and emergent zone, these plant communities will be evaluated as one.
6. At the end of the second year of the monitoring period, approximate relative coverage (determined by ocular estimation) of non-native species cannot exceed 50%. As such, relative coverage of natives shall be 50% or greater at the end of the second growing season. At the end of the third year of the monitoring period, approximate relative coverage (determined by ocular estimation) of non-native species cannot exceed 25%. As such, relative coverage of natives shall be 75% or greater at the end of the third growing season. This standard shall be evaluated separately for each plant community. For the basins that have both a wet meadow and emergent zone, these plant communities will be evaluated as one.
7. Relative coverage (determined by ocular estimation) of cattails shall be less than 10%



-
- throughout, and at the end of, the three-year period.
8. Relative coverage (determined by ocular estimation) of common reed, reed canary grass and purple loosestrife in aggregate shall be less than 5% throughout, and at the end of, the three-year period.
 9. Relative coverage (determined by ocular estimation) of thistle and teasel in aggregate shall be less than 5% throughout, and at the end of, the three-year period.
 10. Each naturalized basin plant communities in aggregate shall achieve a minimum FQI of 15.0 at the end of the third year of the monitoring period.

VEGETATION MONITORING

Annual vegetation monitoring in the naturalized basins will be conducted during the three-year period. Ocular estimation will be used to collect approximate vegetative coverage and relative coverage data. The vegetation monitoring inspections will be conducted twice per year (May/June and August/September). In addition, an inventory of all plant species present in the areas will be collected and will be used to calculate the native FQI values.

ANNUAL REPORTING

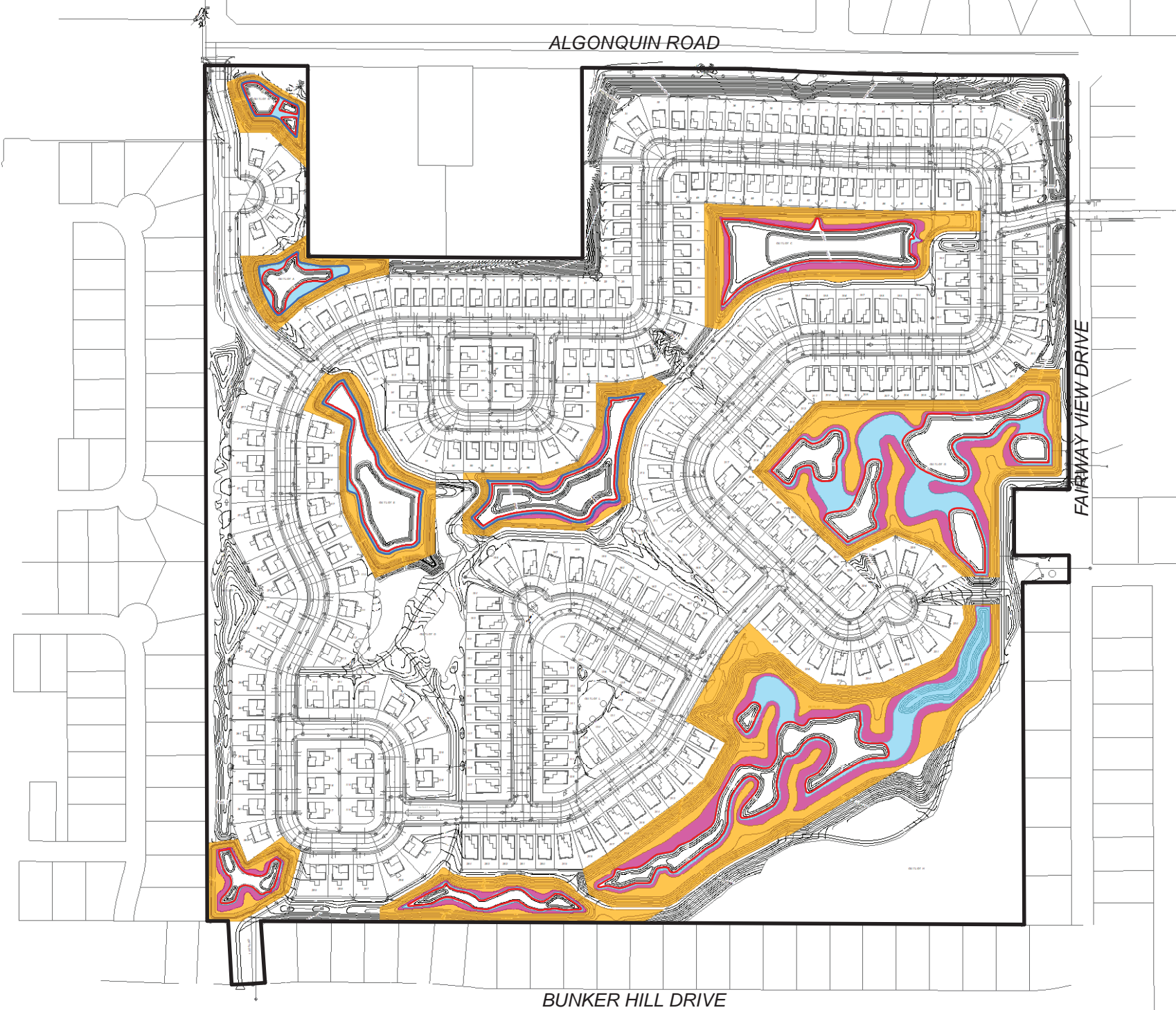
An annual monitoring report will be submitted to The Village of Algonquin and the USACE Chicago District by January 31 of each year during the three-year period or until performance standards are met and signoff is achieved.

The annual report must include a review of site progression towards meeting the performance standards and propose any necessary remedial actions. More specifically, the monitoring report must contain the following information, which will be based on data collected during the monitoring inspections.

1. A summary of management activities conducted during the year.
2. Representative photographs depicting general site conditions.
3. Calculate native mean C and native FQI values, and the native mean wetness coefficient for the prairie area.
4. Provide aerial coverage and relative coverage estimates as needed to evaluate the performance standards.
5. Evaluate the status of the areas relative to the performance standards.
6. Recommend management activities for the following year to address any issues related to site success.

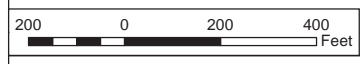


APPENDIX 1
PLANTING PLAN



LEGEND

	PICKEREL WEED (14,287 L.F.)
	SHORELINE (4,598 L.F.)
	EMERGENT (3.98 ACRES)
	WET MEADOW(4.20 ACRES)
	PRAIRIE (15.63 ACRES)
	SITE BOUNDARY




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REVISIONS		
NO.	DATE	DESCRIPTION

BASE LAYER: _____

SEAL: _____

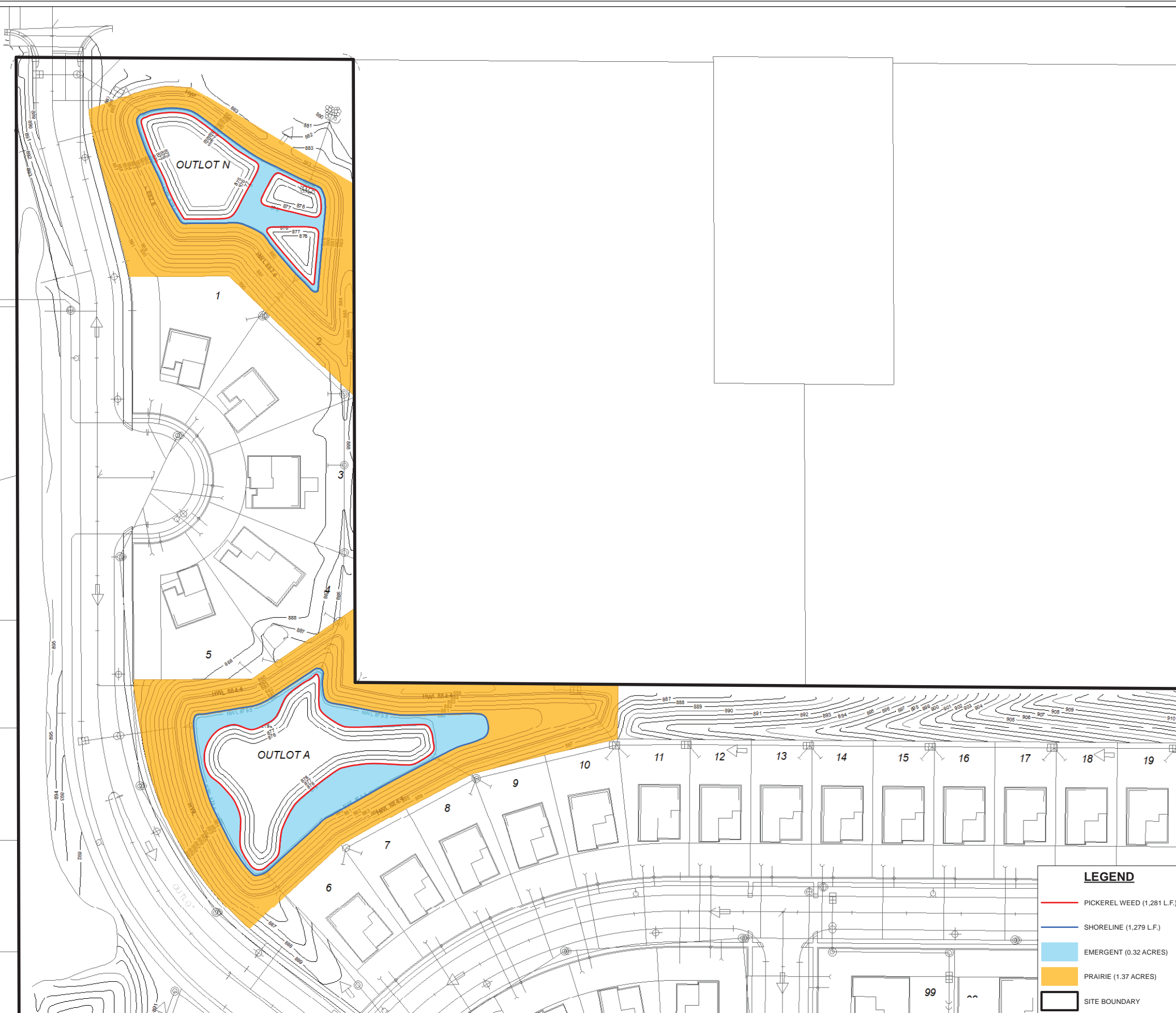
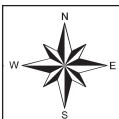
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FILE NAME: excond	DRAWN BY: AMM
DATE: 7/11/2020	CHECKED BY: SJB
SCALE: 1"= 200'	PROJECT MANAGER: SJB

THE TRAILS OF WOODS CREEK

ALGONQUIN ILLINOIS

BMP NATIVE PLANTING PLAN

EXHIBIT
C1



LEGEND

- PICKEREL WEED (1,281 L.F.)
- SHORELINE (1,279 L.F.)
- EMERGENT (0.32 ACRES)
- PRAIRIE (1.37 ACRES)
- SITE BOUNDARY



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BASE LAYER: _____
SEAL: _____

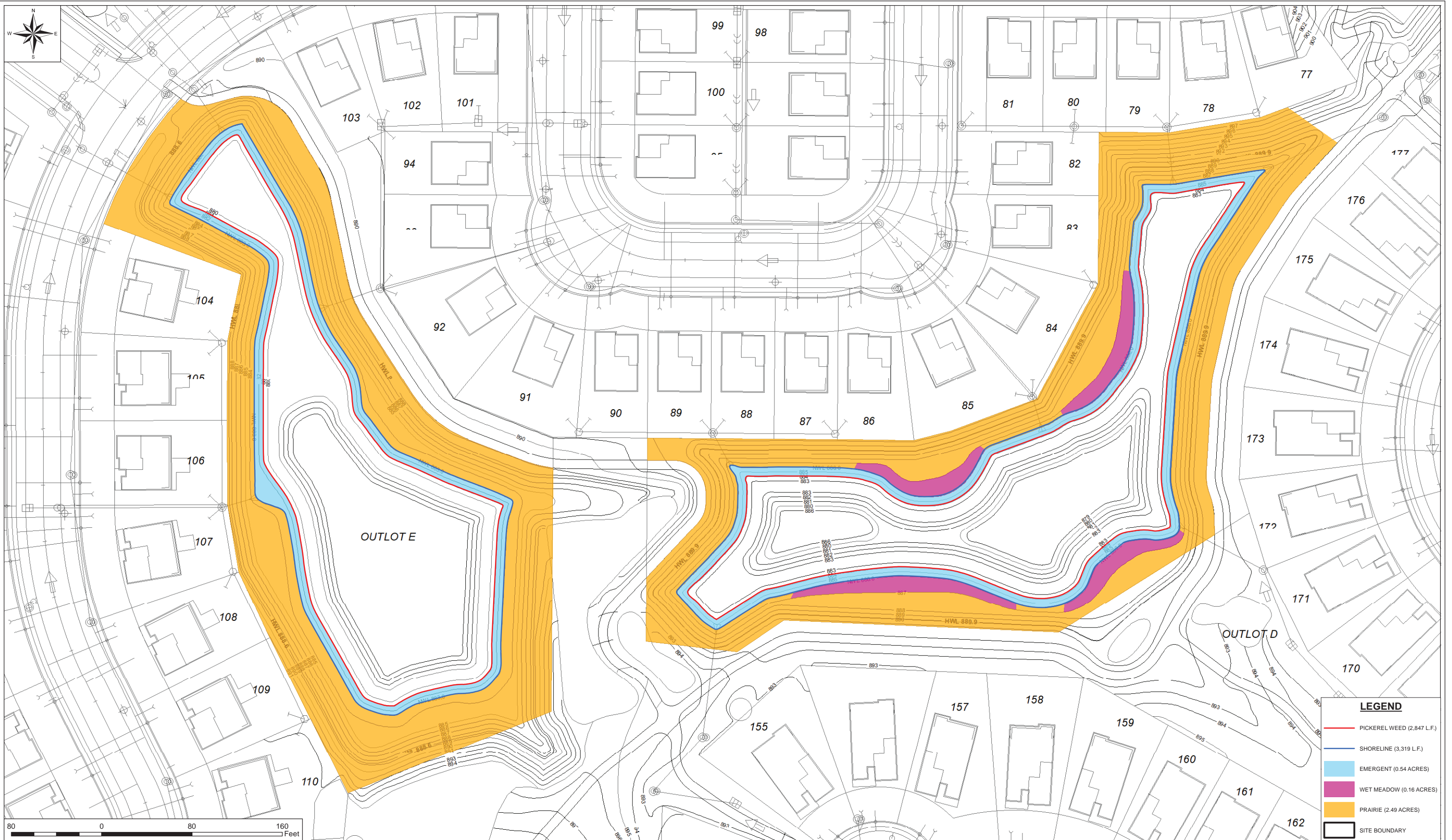
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FILE NAME: excond	DRAWN BY: AMM
DATE: 7/11/2020	CHECKED BY: SJB
SCALE: 1" = 50'	PROJECT MANAGER: SJB

**THE TRAILS OF
WOODS CREEK**

ALGONQUIN ILLINOIS

**BMP NATIVE
PLANTING PLAN**

C2



LEGEND

- PICKEREL WEED (2,847 L.F.)
- SHORELINE (3,319 L.F.)
- EMERGENT (0.54 ACRES)
- WET MEADOW (0.16 ACRES)
- PRAIRIE (2.49 ACRES)
- SITE BOUNDARY



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NO.	DATE	DESCRIPTION

BASE LAYER: _____
 SEAL: _____

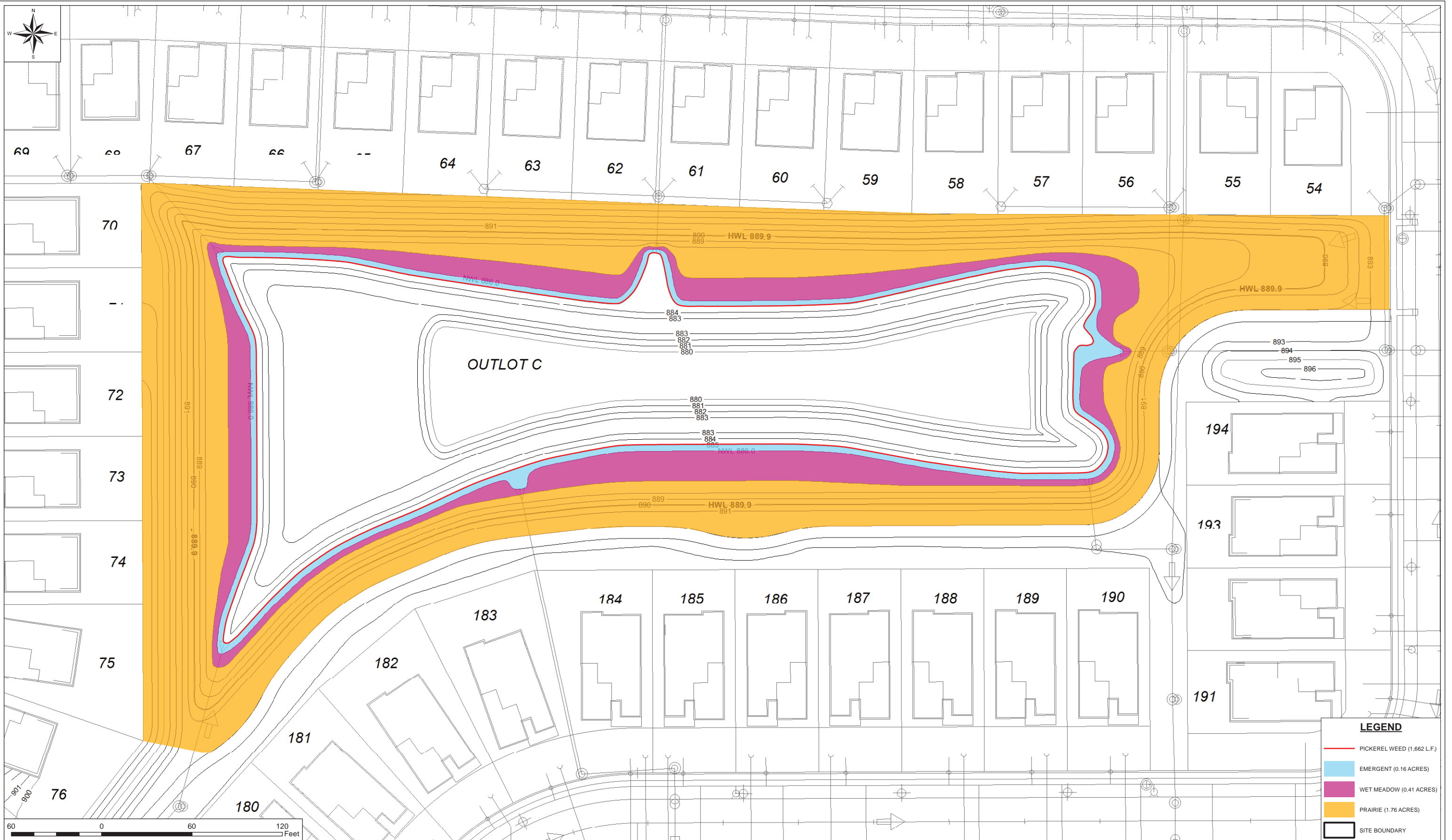
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SCALE:	1" = 40'	PROJECT MANAGER:	SJB

**THE TRAILS OF
WOODS CREEK**

ALGONQUIN ILLINOIS

**BMP NATIVE
PLANTING PLAN**

C3



LEGEND

- PICKEREL WEED (1,662 L.F.)
- EMERGENT (0.16 ACRES)
- WET MEADOW (0.41 ACRES)
- PRAIRIE (1.76 ACRES)
- SITE BOUNDARY



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NO.	DATE	DESCRIPTION

BASE LAYER: _____
SEAL: _____

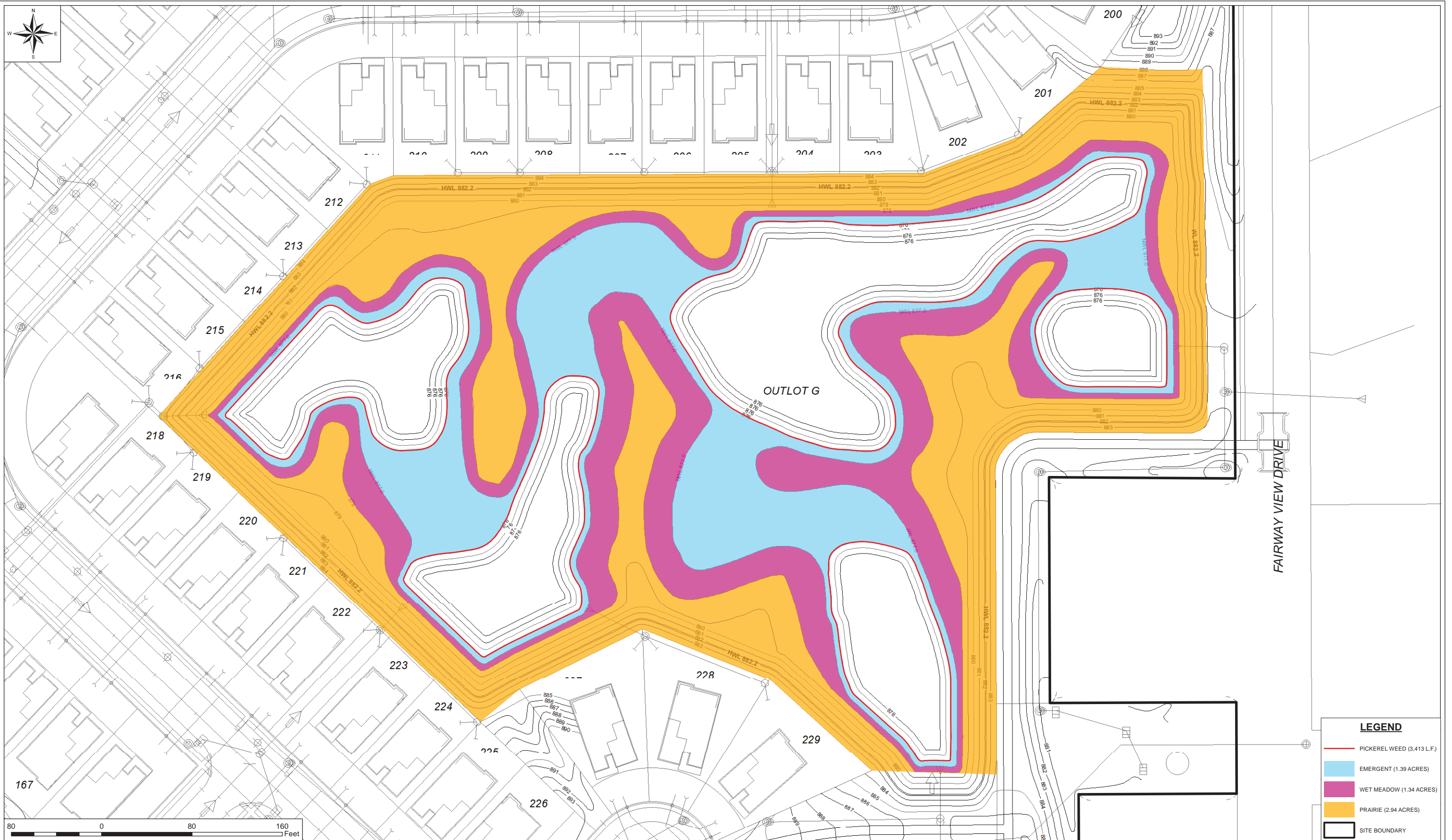
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THE TRAILS OF WOODS CREEK
ALGONQUIN ILLINOIS

BMP NATIVE PLANTING PLAN

EXHIBIT **C4**

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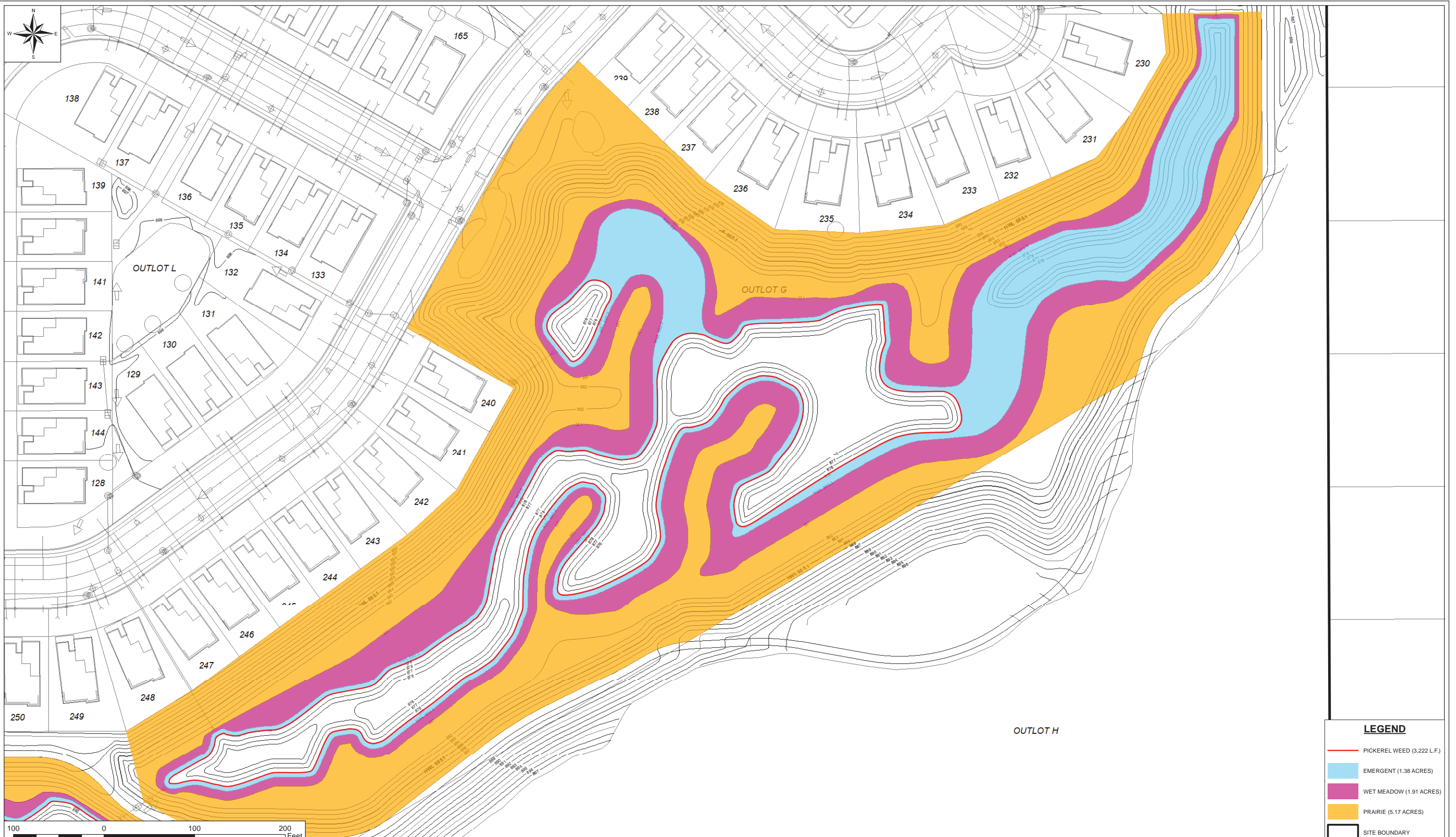
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 FILE NAME: excond
 DATE: 7/11/2020
 SCALE: 1" = 40'

DESIGNED BY: AMM
 DRAWN BY: AMM
 CHECKED BY: SJB
 PROJECT MANAGER: SJB

THE TRAILS OF WOODS CREEK
 ALGONQUIN ILLINOIS

BMP NATIVE PLANTING PLAN

EXHIBIT
C5



LEGEND

	PICKEREL WEED (3,222 L.F.)
	EMERGENT (1.38 ACRES)
	WET MEADOW (1.91 ACRES)
	PRAIRIE (5.17 ACRES)
	SITE BOUNDARY



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NO.	DATE	DESCRIPTION

BASE LAYER:	
SEAL:	

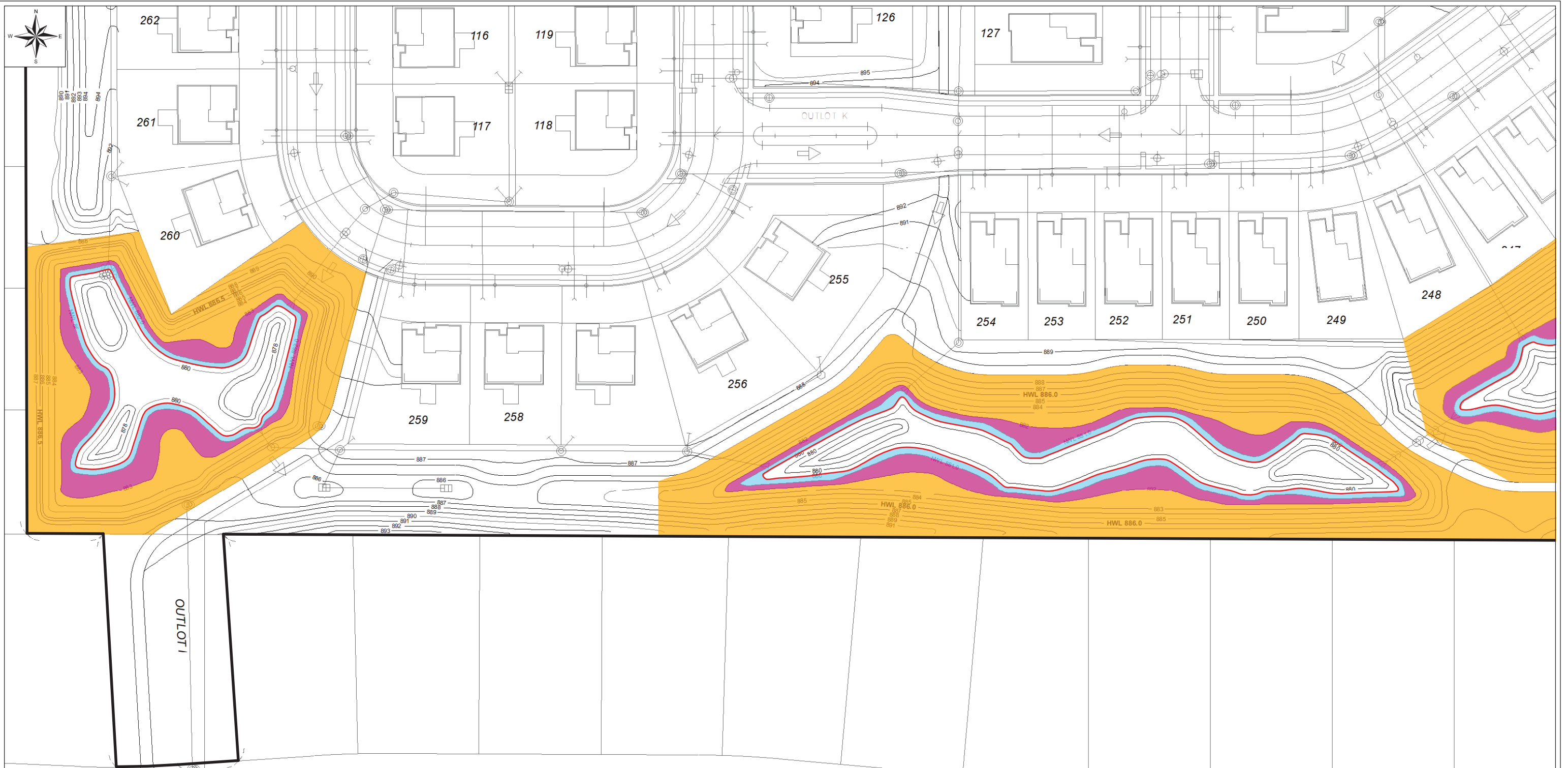
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FILE NAME:	excond	DRAWN BY:	AMM
DATE:	7/11/2020	CHECKED BY:	SJB
SCALE:	1" = 50'	PROJECT MANAGER:	SJB

THE TRAILS OF WOODS CREEK

ALGONQUIN ILLINOIS

BMP NATIVE PLANTING PLAN

EXHIBIT
C6



LEGEND	
	PICKEREL WEED (1,862 L.F.)
	EMERGENT (0.19 ACRES)
	WET MEADOW (0.38 ACRES)
	PRAIRIE (1.90 ACRES)
	SITE BOUNDARY

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REVISIONS		
NO.	DATE	DESCRIPTION

BASE LAYER:
 SEAL:

PROJECT NO.:	19381	DESIGNED BY:	AMM
FILE NAME:	excond	DRAWN BY:	AMM
DATE:	7/11/2020	CHECKED BY:	SJB
SCALE:	1" = 40'	PROJECT MANAGER:	SJB

**THE TRAILS OF
 WOODS CREEK**
 ALGONQUIN ILLINOIS

**BMP NATIVE
 PLANTING PLAN**

EXHIBIT
C7

APPENDIX 2
NATIVE SEED AND PLUG MIXES

WET MEADOW SEED AND PLUG MIX (4.20 Acres)			
Species	Common Name	Seeding Rate (lbs/acre)	Planting Rate (plugs/acre)
Grasses			
<i>Andropogon gerardii</i>	Big Bluestem	3.000	0
<i>Elymus canadensis</i>	Canada Wild Rye	3.000	0
<i>Elymus virginicus</i>	Virginia Wild Rye	3.000	0
<i>Leersia oryzoides</i>	Rice Cut Grass	0.250	0
<i>Panicum virgatum</i>	Switch Grass	2.000	0
<i>Spartina pectinata</i>	Prairie Cord Grass	0.000	1,000
sub total per acre:		11.250	1,000
Sedges and Rushes			
<i>Carex annectans xanthocarpa</i>	Small Yellow Fox Sedge	0.250	100
<i>Carex cristatella</i>	Crested Oval Sedge	0.125	100
<i>Carex frankii</i>	Bristly Cattail Sedge	0.500	0
<i>Carex lacustris</i>	Lake Sedge	0.000	100
<i>Carex molesta</i>	Troublesome Sedge	0.500	200
<i>Carex pellita</i>	Woolly Sedge	0.250	200
<i>Carex tribuloides</i>	Awl-Fruited Sedge	0.250	0
<i>Carex scoparia</i>	Lance Fruited Oval Sedge	0.250	0
<i>Carex vulpinoidea</i>	Brown Fox Sedge	1.000	500
<i>Eleocharis erythropoda</i>	Red-Rooted Spike Rush	0.125	0
<i>Juncus dudleyi</i>	Dudley's Rush	0.125	0
<i>Juncus torreyi</i>	Torrey's Rush	0.125	0
<i>Scirpus atrovirens</i>	Dark Green Rush	0.500	100
<i>Scirpus cyperinus</i>	Wool Grass	0.063	0
<i>Scirpus pendulus</i>	Red Bulrush	0.125	100
<i>Scirpus validus creber</i>	Great Bulrush	0.250	0
sub total per acre:		4.438	1,400
Forbs			
<i>Asclepias incaranta</i>	Marsh Milkweed	0.250	200
<i>Boltonia asteroides</i>	False Aster	0.125	100
<i>Coreopsis tripteris</i>	Tall Coreopsis	0.250	0
<i>Eryngium yuccifolium</i>	Rattlesnake Master	0.250	0
<i>Euthamia graminifolia</i>	Grass-Leaved Goldenrod	0.125	0
<i>Helenium autumnale</i>	Sneezeweed	0.250	0
<i>Heliopsis helianthoides</i>	False Sunflower	0.125	0
<i>Mimulus ringens</i>	Monkey Flower	0.031	100
<i>Monarda fistulosa</i>	Wild Bergamot	0.125	0
<i>Penstemon digitalis</i>	Foxglove Beard Tongue	0.125	0
<i>Physostegia virginiana</i>	Obedient Plant	0.125	200
<i>Pycnanthemum virginianum</i>	Common Mountain Mint	0.250	0
<i>Ratibida pinnata</i>	Yellow Coneflower	0.350	0
<i>Rudbeckia subtomentosa</i>	Sweet Black-eyed Susan	0.125	0
<i>Symphotrichum lanceolatum</i>	Panicled Aster	0.125	0
<i>Symphotrichum novae-angliae</i>	New England Aster	0.125	0
<i>Vernonia fasciculata</i>	Common Iron Weed	0.125	0
<i>Verbena hastata</i>	Blue Vervain	0.500	0
<i>Zizia aurea</i>	Golden Alexanders	0.250	0
sub total per acre:		3.631	600
*total per acre:		19.319	3,000
Cover Crop			
<i>Avena sativa</i>	Seed Oats	32.000	0.000
<i>Lolium multiflorum</i>	Annual Rye	1.000	0.000
<small>*does not include Cover Crop</small>			

MESIC PRAIRIE SEED MIX (15.63 Acres)			
Type	Species	Common Name	Seeding Rate (lbs/ac)
Forbs	<i>Asclepias tuberosa</i>	Butterfly Weed	0.350
	<i>Astragalus canadensis</i>	Canadian Milk Vetch	0.250
	<i>Baptisia leucantha</i>	White Wild Indigo	0.250
	<i>Cassia fasciculata</i>	Partridge Pea	0.250
	<i>Coreopsis lanceolata</i>	Sand Coreopsis	0.250
	<i>Coreopsis palmata</i>	Prairie Coreopsis	0.250
	<i>Coreopsis tripteris</i>	Tall Coreopsis	0.250
	<i>Dalea candida</i>	White Prairie Clover	0.125
	<i>Dalea purpurea</i>	Purple Prairie Clover	0.125
	<i>Echinacea pallida</i>	Purple Coneflower	0.125
	<i>Echinacea purpurea</i>	Broad-leaved Pur. Coneflower	0.500
	<i>Eryngium yuccifolium</i>	Rattlesnake Master	0.250
	<i>Heliopsis helianthoides</i>	False Sunflower	0.125
	<i>Monarda fistulosa</i>	Wild Bergamot	0.125
	<i>Lespedeza capitata</i>	Round-headed Bush Clover	0.125
	<i>Oligoneuron rigidum</i>	Stiff Goldenrod	0.125
	<i>Parthenium integrifolium</i>	Wild Quinine	0.125
	<i>Penstemon digitalis</i>	Foxglove Beard Tongue	0.250
	<i>Ratibida pinnata</i>	Yellow Coneflower	0.350
	<i>Rudbeckia hirta</i>	Black-eyed Susan	0.250
	<i>Rudbeckia subtomentosa</i>	Sweet Black-eyed Susan	0.125
	<i>Silphium integrifolium</i>	Rosin Weed	0.125
	<i>Silphium laciniatum</i>	Compass Plant	0.250
	<i>Silphium terbinthinaceum</i>	Prairie Dock	0.250
	<i>Symphotrichum laevis</i>	Smooth Blue Aster	0.250
	<i>Symphotrichum novae-angliae</i>	New England Aster	0.250
	<i>Verbena stricta</i>	Hoary Vervain	0.125
	<i>Vernonia fasciculata</i>	Common Iron Weed	0.125
<i>Zizia aurea</i>	Golden Alexanders	0.250	
		sub total	6.200
Grasses & Sedges	<i>Andropogon gerardii</i>	Big Bluestem	1.000
	<i>Bouteloua curtipendula</i>	Side-oats Grama	10.000
	<i>Carex bicknellii</i>	Bicknells Sedge	0.125
	<i>Carex brevior</i>	Plains Oval Sedge	0.250
	<i>Carex muehlenbergii</i>	Sand Sedge	0.250
	<i>Elymus canadensis</i>	Canada wild rye	3.000
	<i>Panicum virgatum</i>	Switch Grass	1.000
	<i>Schizachyrium scoparium</i>	Little Bluestem	10.000
			sub total
		Total Permanent Species:	31.825
Cover	<i>Avena sativa</i>	Seed Oats	32.000
	<i>Lolium multiflorum</i>	Annual Rye Seed Cree	1.000

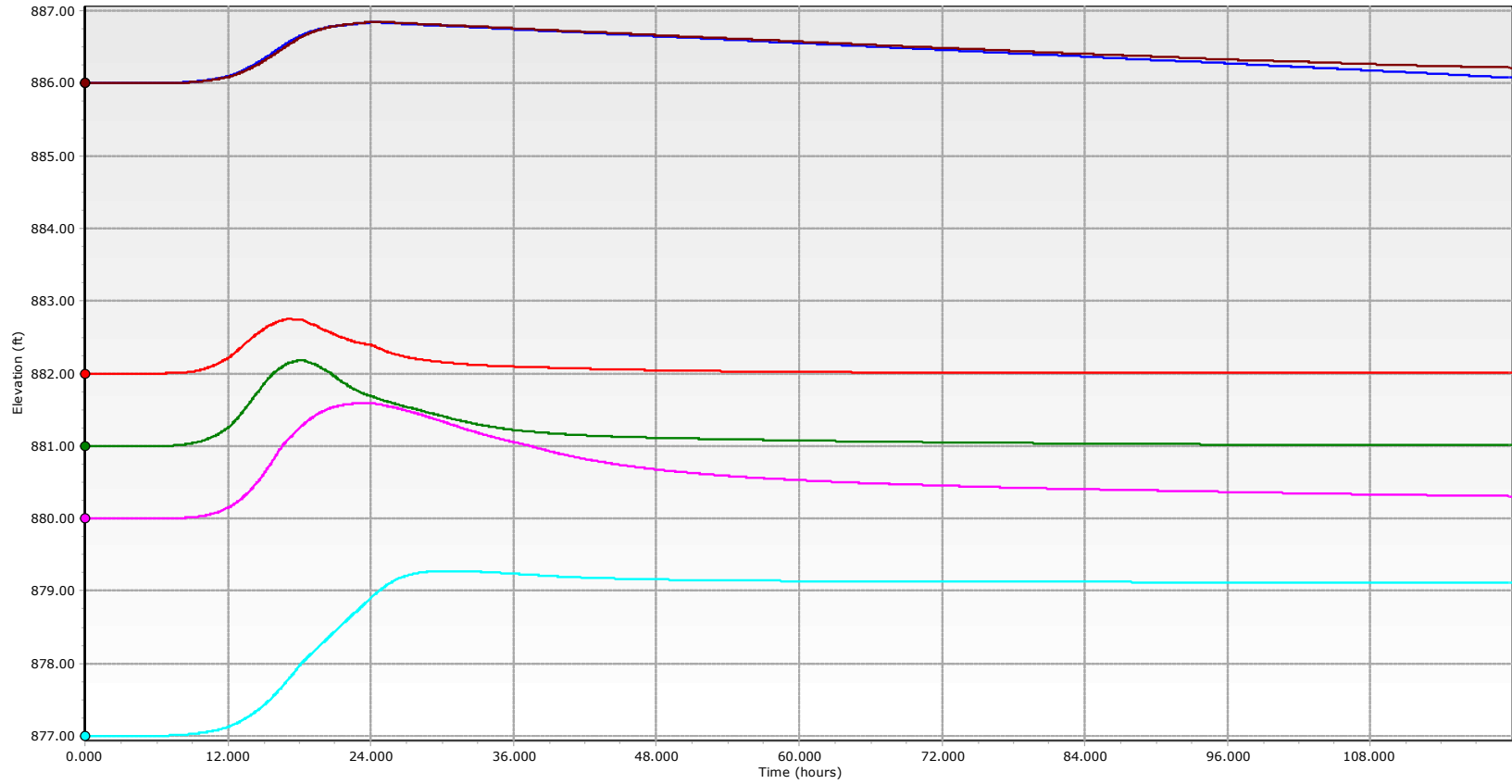
EMERGENT PLUG MIX (3.98 Acres)		
Scientific Name	Common Name	Planting Rate (plugs/ac)
<i>Acorus americanus</i>	Sweet Flag	800
<i>Iris virginica</i>	Blue Flag	400
<i>Juncus effusus</i>	Soft Rush	200
<i>Sagittaria latifolia</i>	Common Arrowhead	200
<i>Schoenoplectus acutus</i>	Hard-Stemmed Bulrush	1,000
<i>Schoenoplectus fluviatilis</i>	River Bulrush	200
<i>Schoenoplectus pungens</i>	Chairmaker's Rush	500
<i>Schoenoplectus tabernaemontani</i>	Great Bulrush	1,000
<i>Sparganium eurycarpum</i>	Bur Reed	700
Total Permanent Species Per/Acre:		5,000

SHORELINE PLUG ZONE - 4,598 LF		
Plants installed at toe of slope ~2' on center in two rows parallel with the shoreline)		
SHORELINE PLANTING ROW (plants installed at toe of slope along NWL elevation - plugs 2 foot on center)		
Species	Common Name	Quantity
<i>Carex emoryi</i>	Riverbank Sedge	575
<i>Carex lacustris</i>	Lake Sedge	575
<i>Schoenoplectus pungens</i>	Chairmaker's Rush	575
<i>Scirpus atrovirens</i>	Dark Green Bulrush	575
<i>sub total:</i>		2,300
UPPER SHORELINE PLANTING ROW (plants installed 2 horizontal feet above NWL - plugs 2 foot on center)		
Species	Common Name	Quantity
<i>Carex pellita</i>	Whooly Sedge	575
<i>Carex vulpinoidea</i>	Fox Sedge	575
<i>Panicum virgatum</i>	Switch Grass	575
<i>Spartina pectinata</i>	Prairie Cord Grass	575
<i>sub total:</i>		2,300
Total Plants:		4,600

PICKEREL WEED ZONE - 14,287LF		
Pickerel Weed Plants 10-foot on Center in One Row within Zone		
Species	Common Name	Quantity
<i>Pontederia cordata</i>	Pickerel Weed	1,429

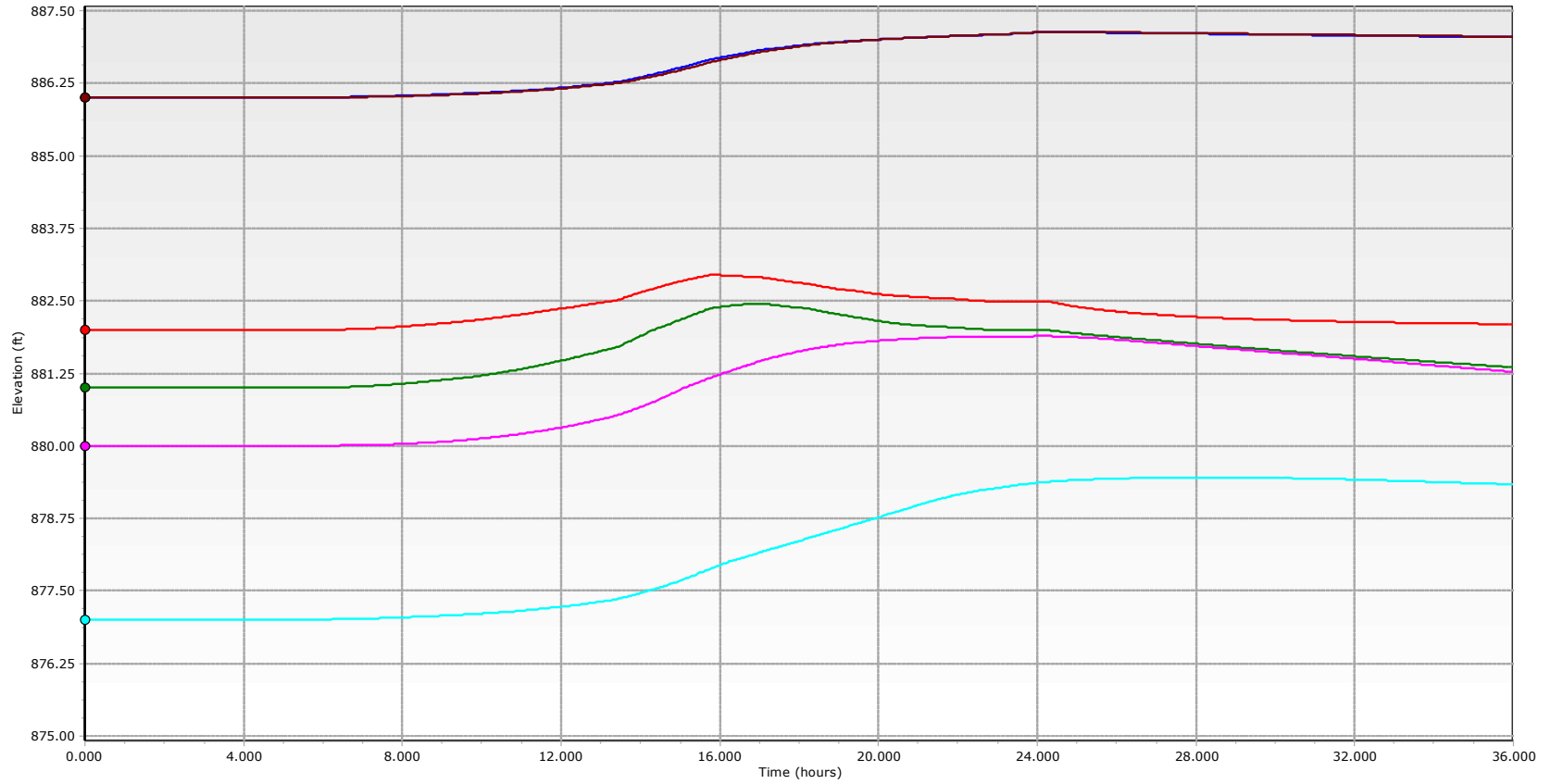
APPENDIX 3
HYDROGRAPHS

OUTLET 1 EAST



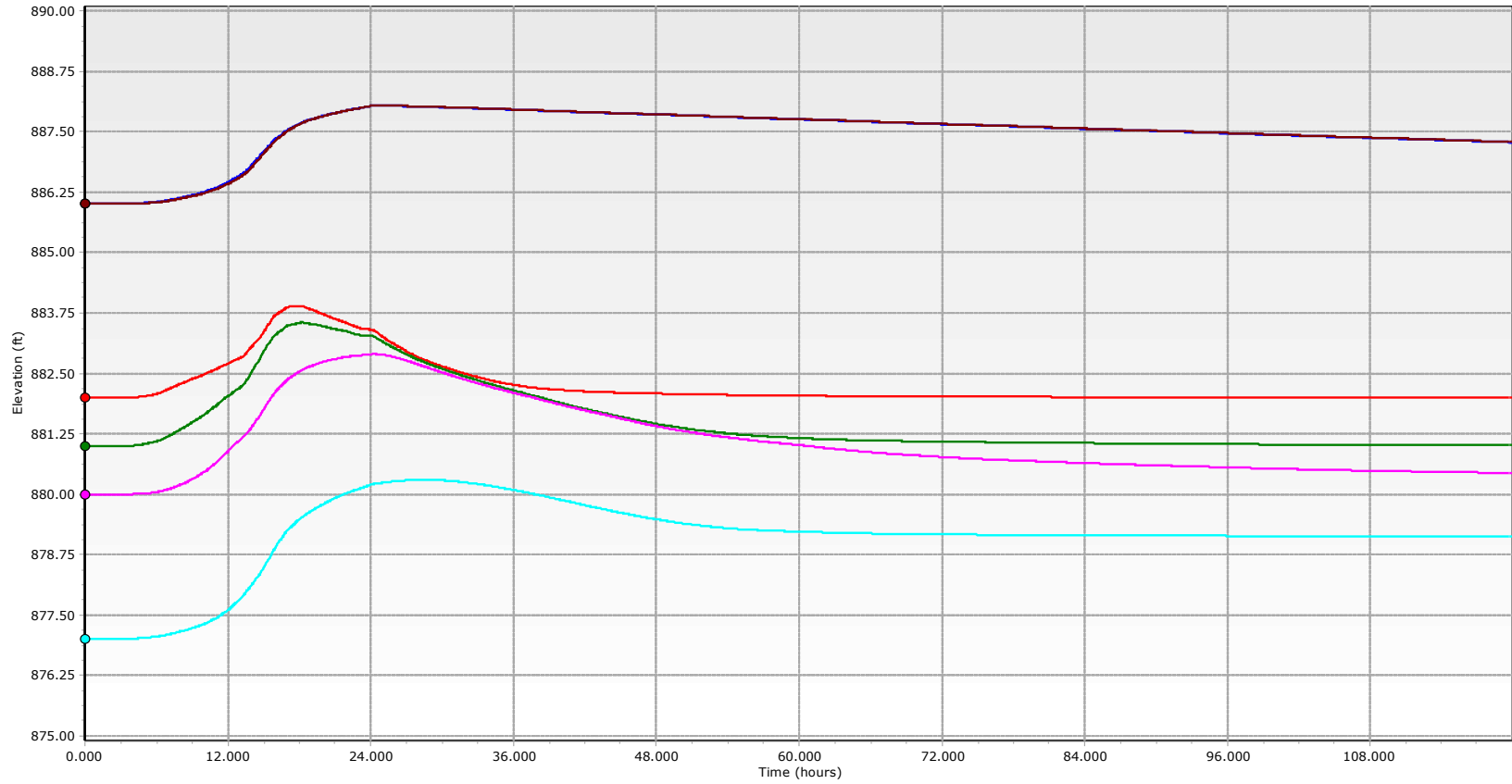
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SWMF-06 - 1YR-24HR - Elevation

OUTLET 1 EAST



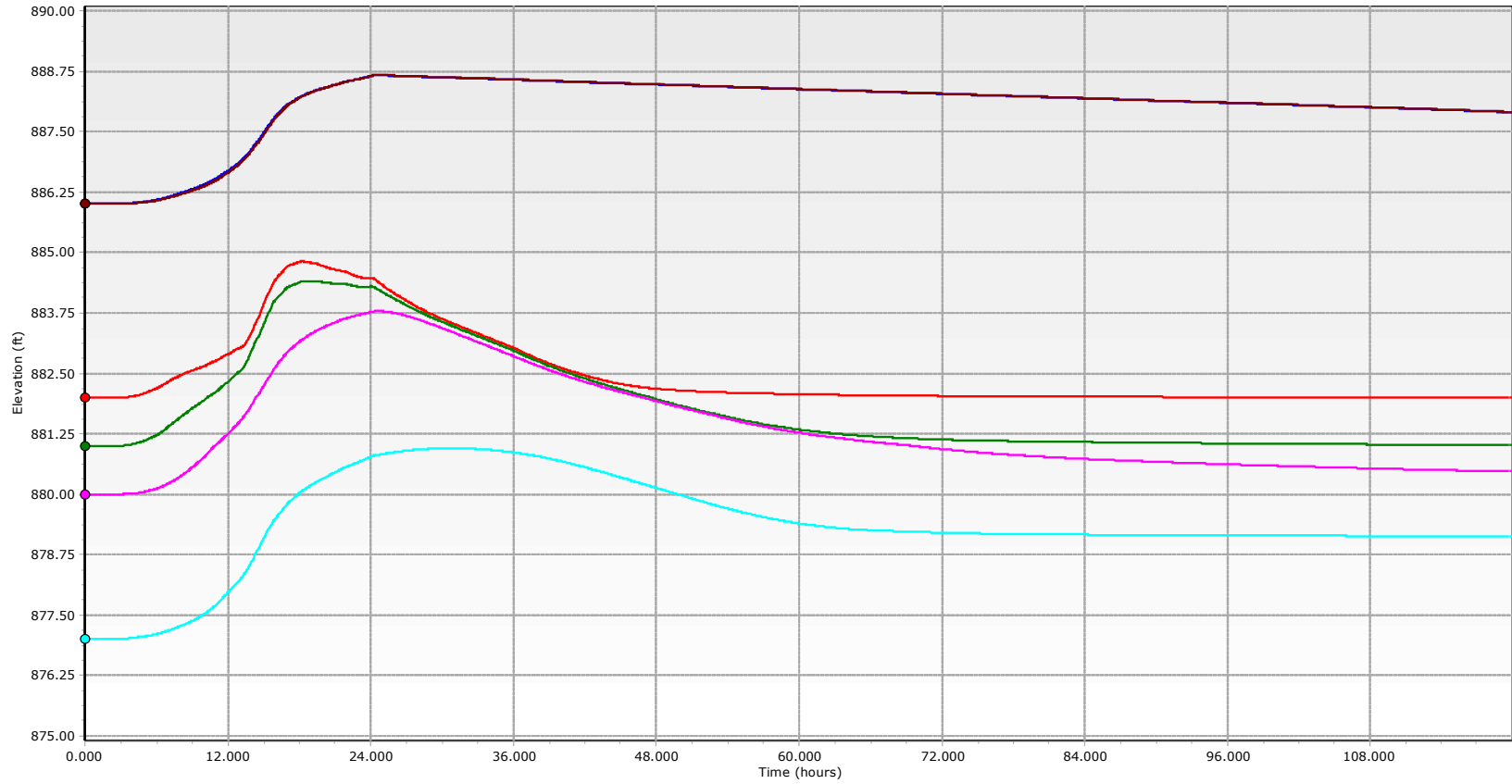
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SWMF-06 - 02Yr 24Hr - Elevation

OUTLET 1 EAST



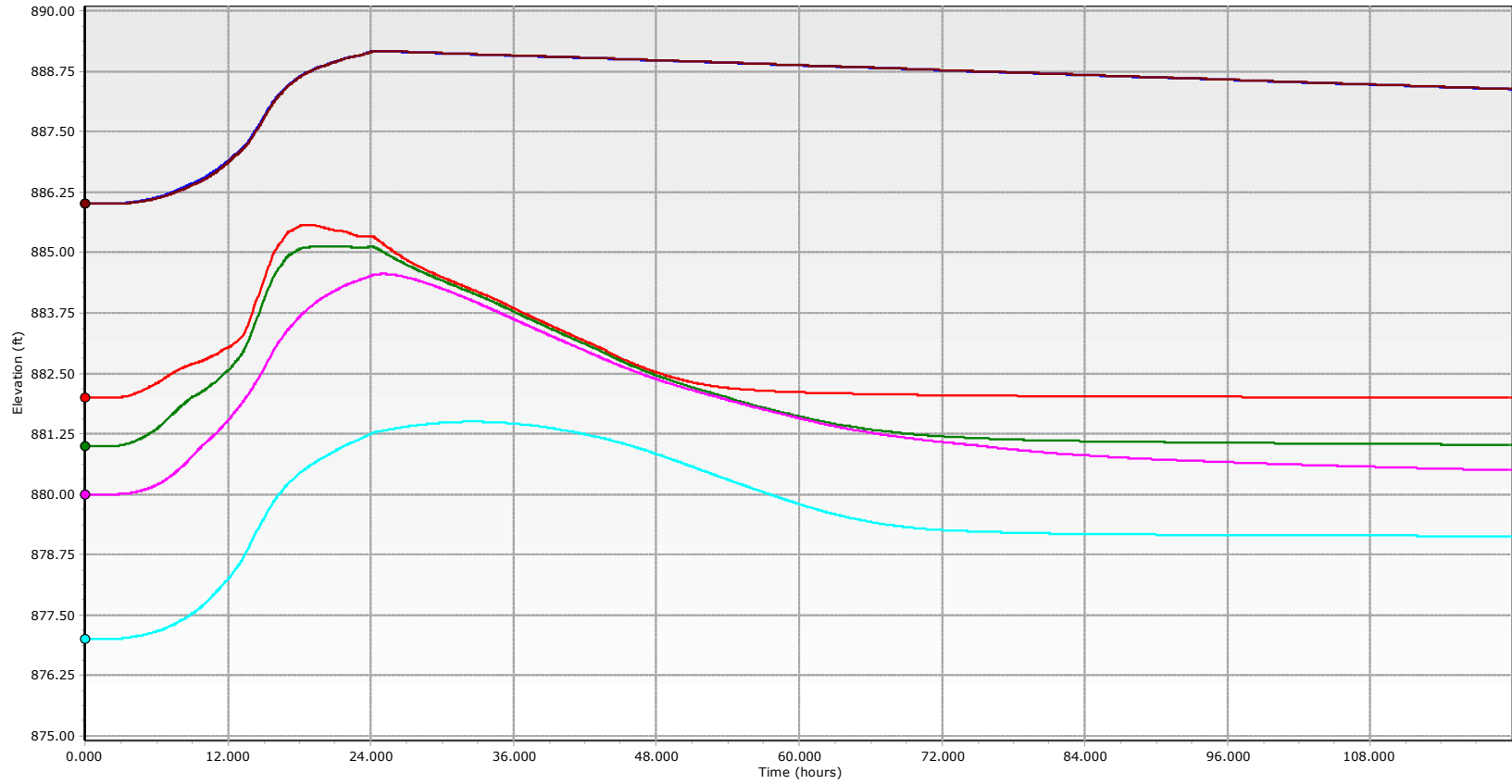
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SWMF-06 - 10Yr 24Hr - Elevation

OUTLET 1 EAST



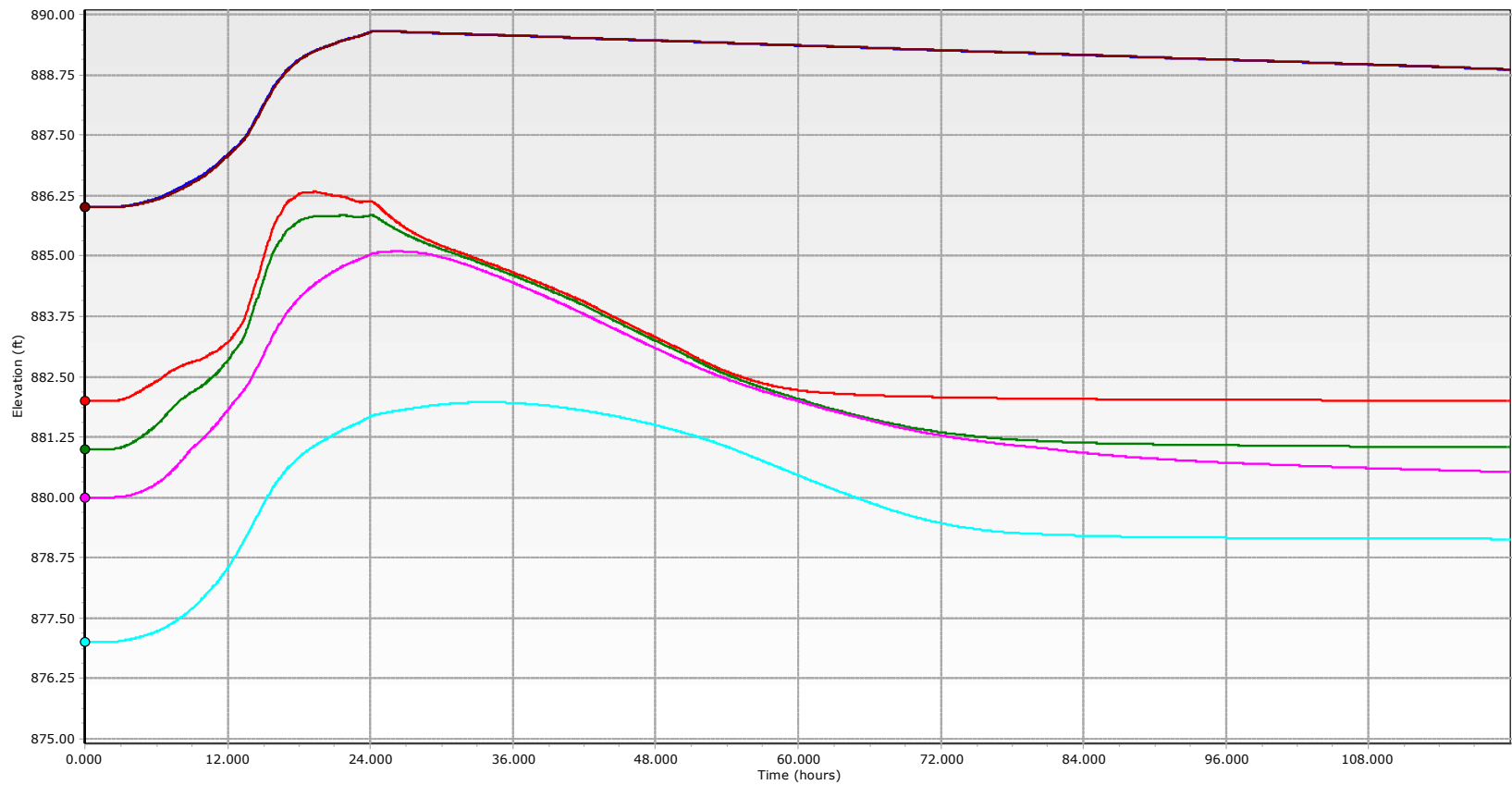
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— SWMF-06 - 25Yr 24Hr - Elevation

OUTLET 1 EAST



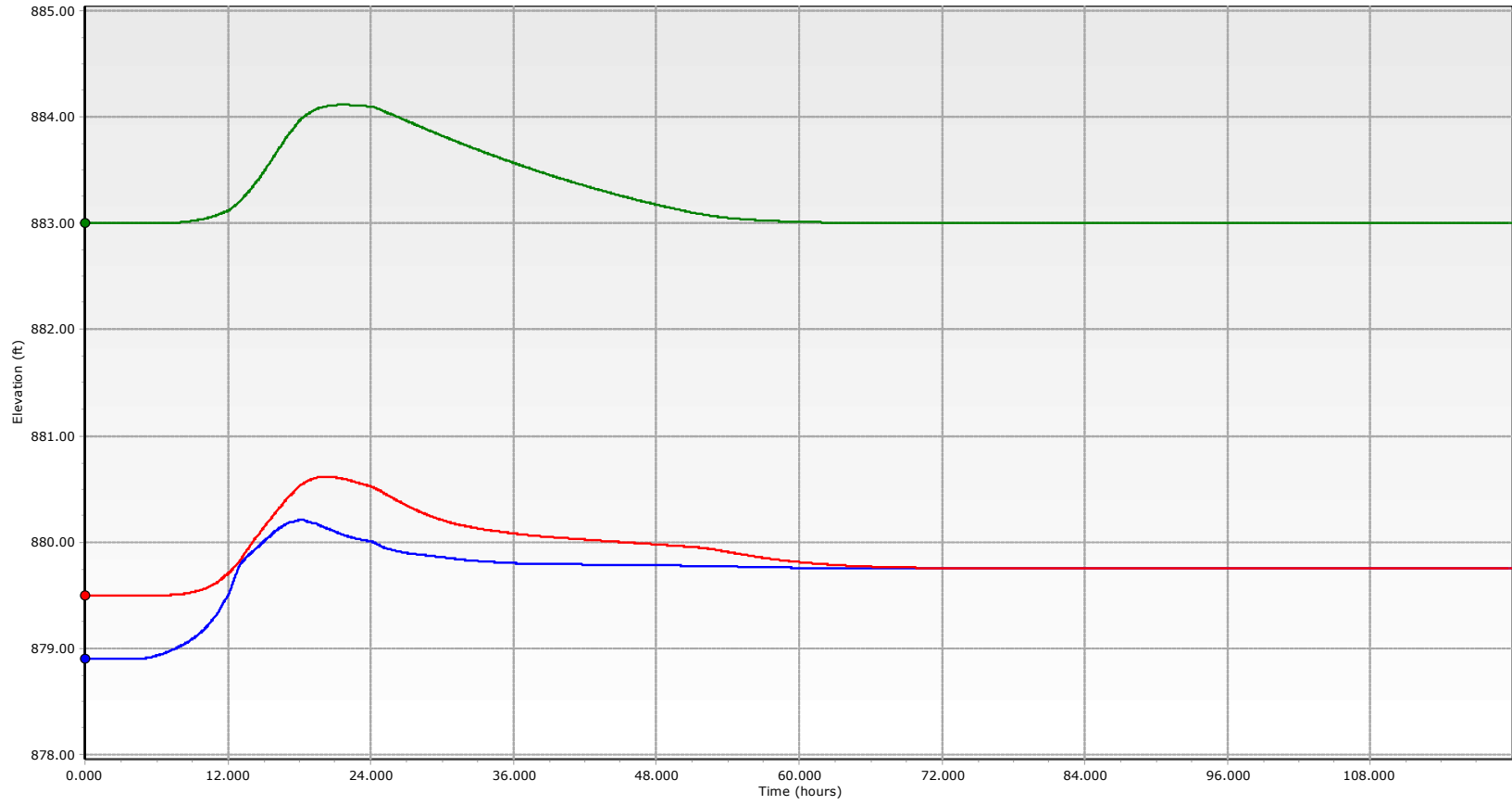
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SWMF-06 - 50Yr 24Hr - Elevation

OUTLET 1 EAST



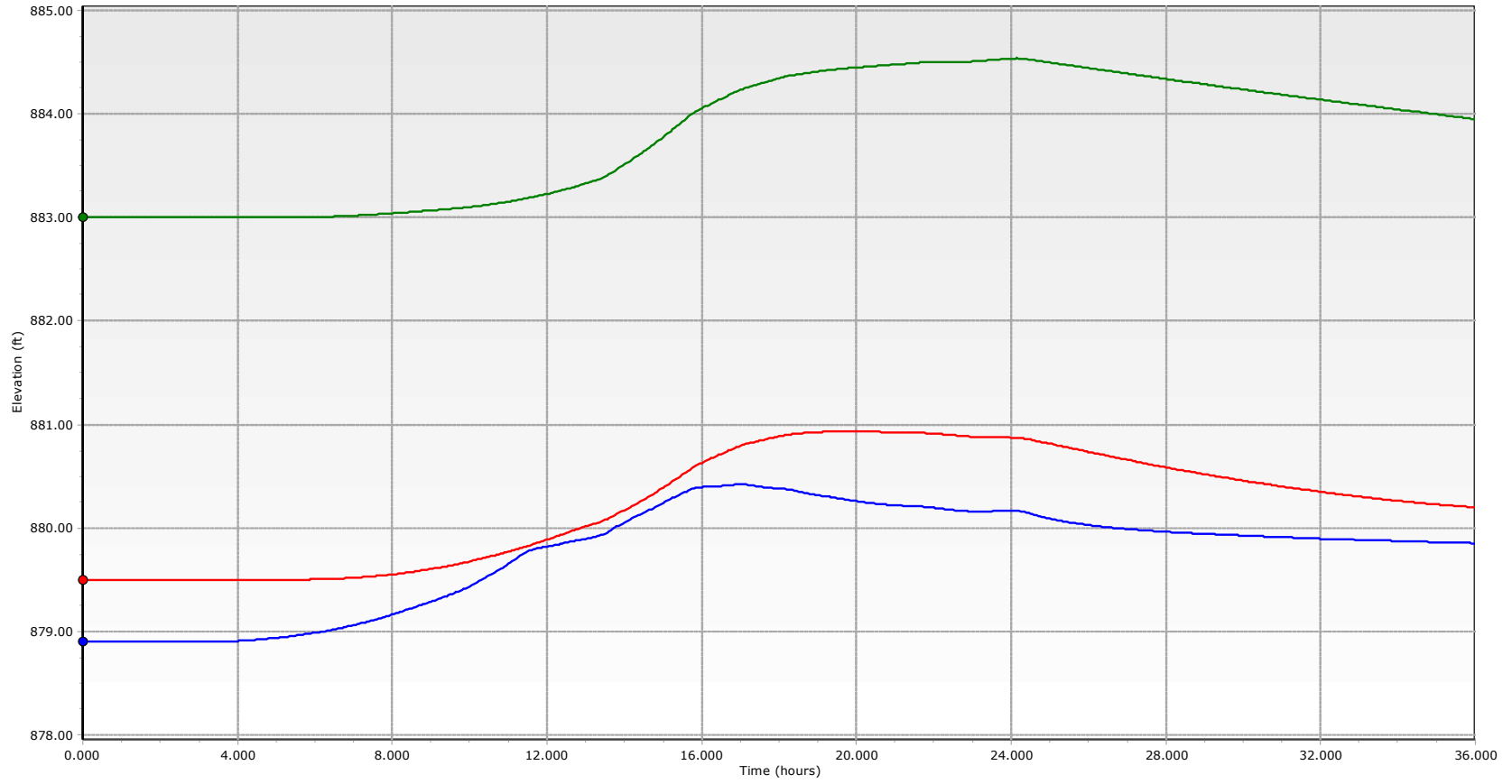
SWMF-05 - 100Yr 24Hr - Elevation SWMF-04 - 100Yr 24Hr - Elevation SWMF-03 - 100Yr 24Hr - Elevation SWMF-02 - 100Yr 24Hr - Elevation SWMF-01 - 100Yr 24Hr - Elevation
SWMF-06 - 100Yr 24Hr - Elevation

OUTLET 2 NORTHWEST



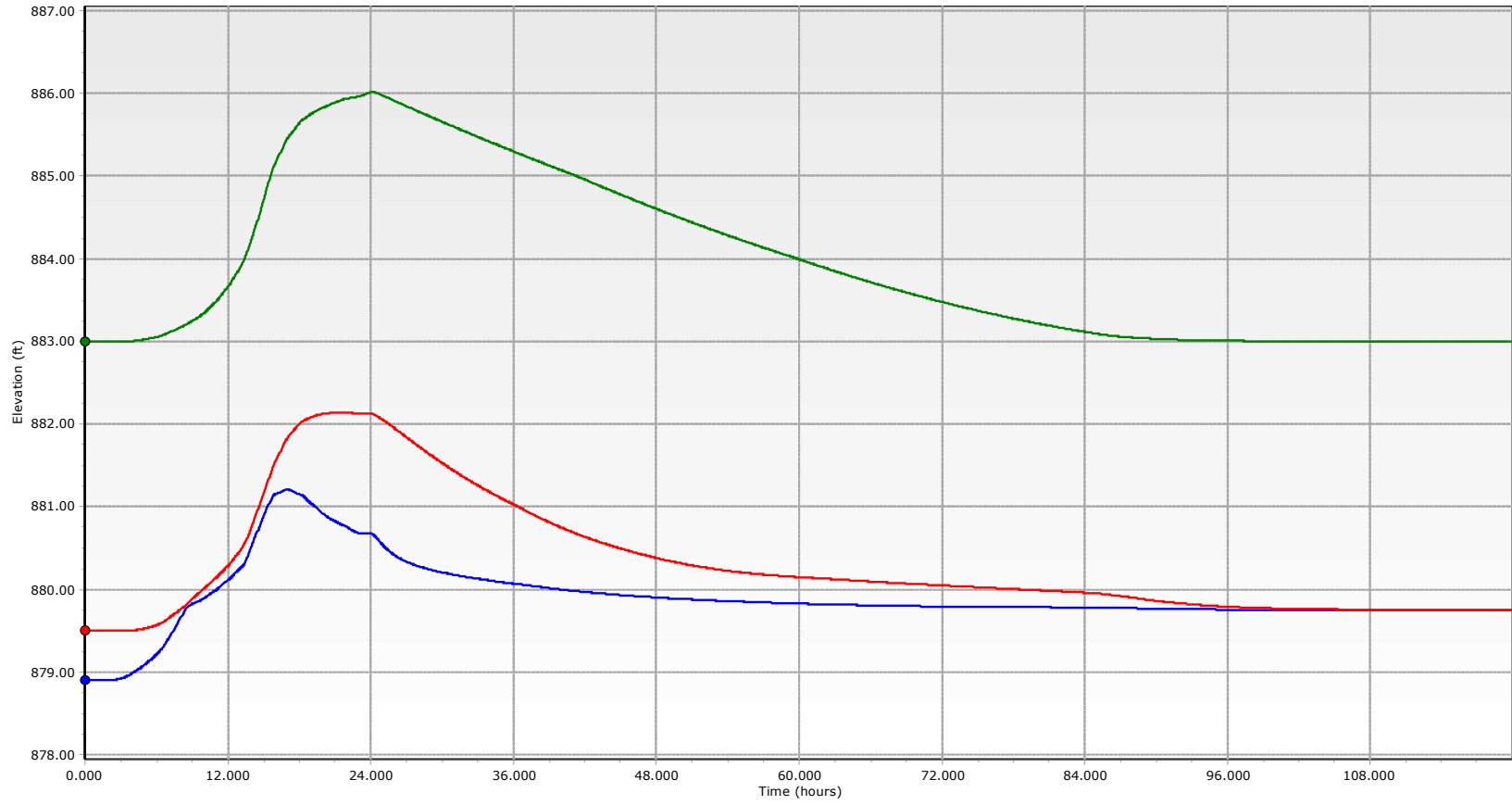
— SWMF-07 - 1YR-24HR - Elevation — SWMF-08 - 1YR-24HR - Elevation — SWMF-09 - 1YR-24HR - Elevation

OUTLET 2 NORTHWEST



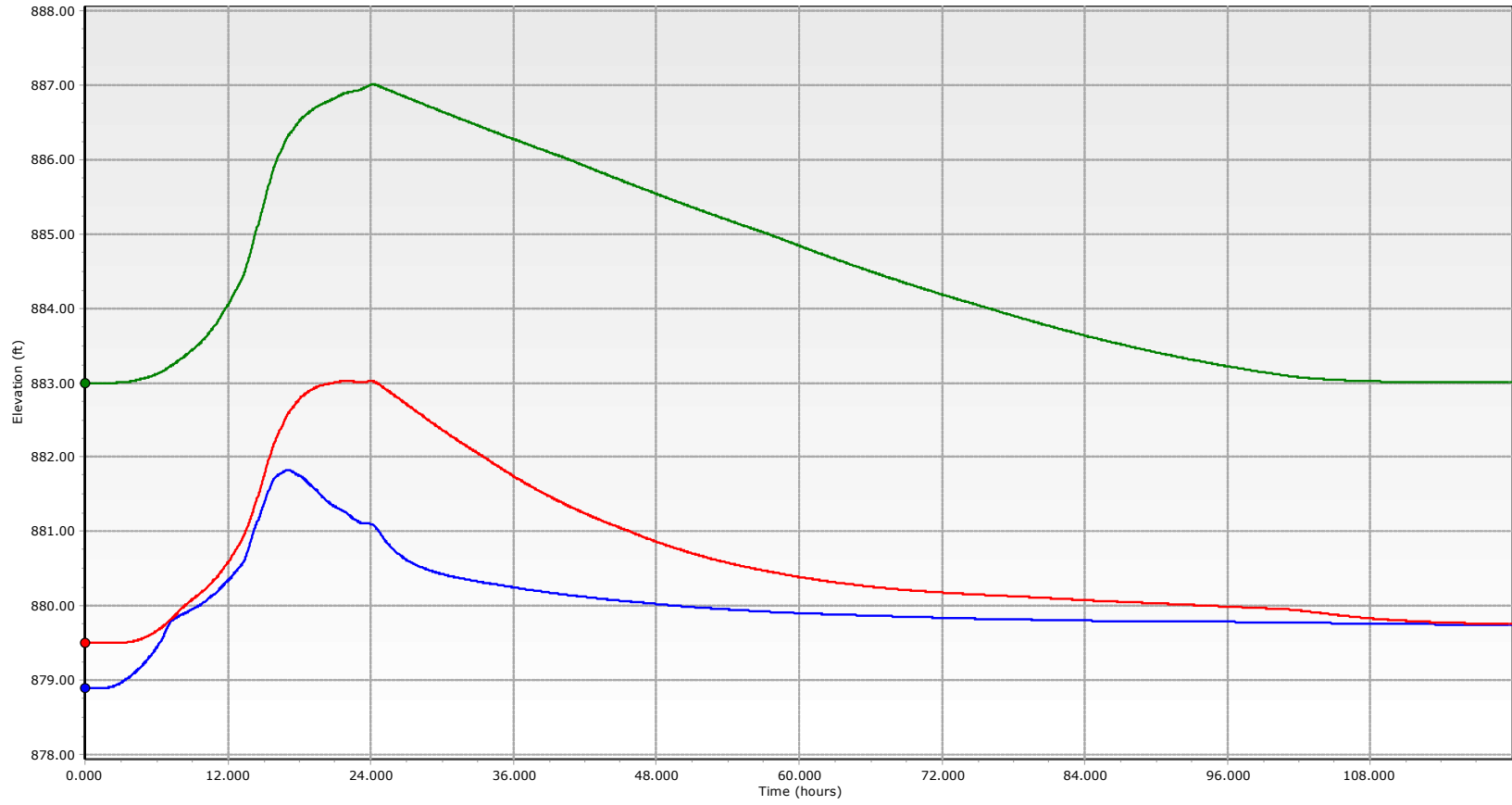
— SWMF-07 - 02Yr 24Hr - Elevation — SWMF-08 - 02Yr 24Hr - Elevation — SWMF-09 - 02Yr 24Hr - Elevation

OUTLET 2 NORTHWEST



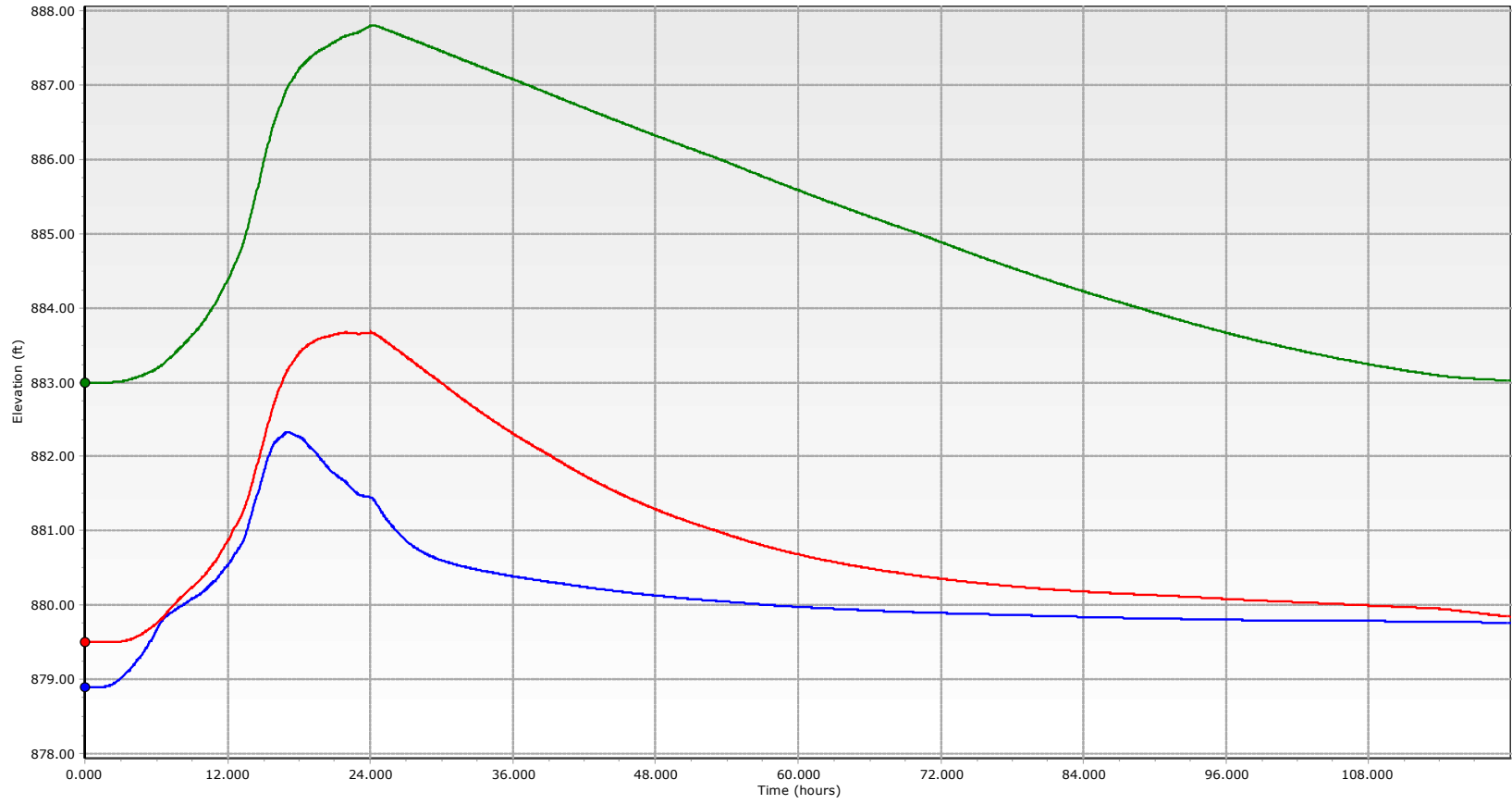
— SWMF-07 - 10Yr 24Hr - Elevation — SWMF-08 - 10Yr 24Hr - Elevation — SWMF-09 - 10Yr 24Hr - Elevation

OUTLET 2 NORTHWEST



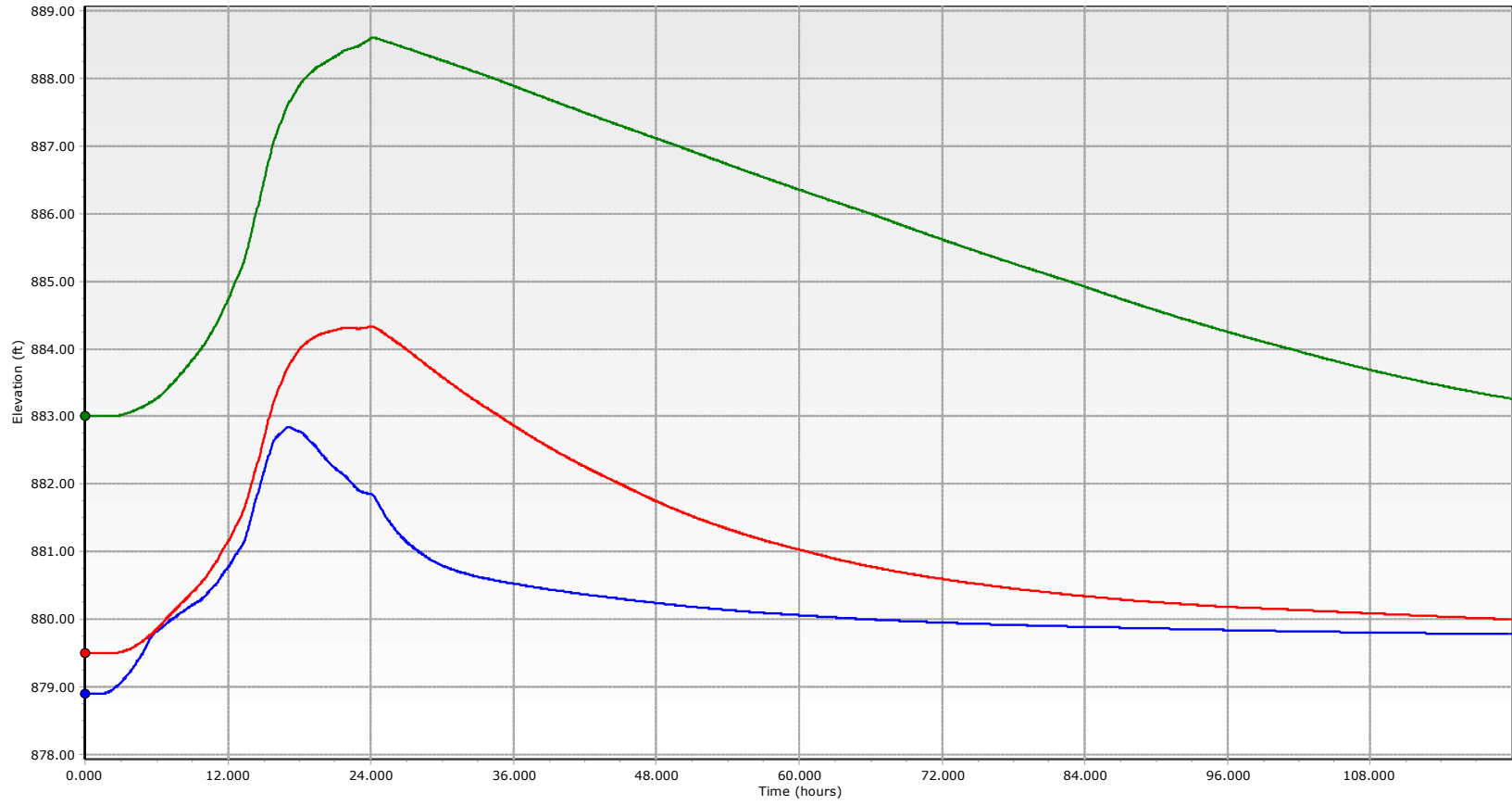
— SWMF-07 - 25Yr 24Hr - Elevation — SWMF-08 - 25Yr 24Hr - Elevation — SWMF-09 - 25Yr 24Hr - Elevation

OUTLET 2 NORTHWEST



— SWMF-07 - 50Yr 24Hr - Elevation — SWMF-08 - 50Yr 24Hr - Elevation — SWMF-09 - 50Yr 24Hr - Elevation

OUTLET 2 NORTHWEST



— SWMF-07 - 100Yr 24Hr - Elevation — SWMF-08 - 100Yr 24Hr - Elevation — SWMF-09 - 100Yr 24Hr - Elevation