



MEMORANDUM

To: Aladdin Husain, Village Engineer
Village of Orland Park

From: Sarah Skowronski, PWS
Kimley-Horn and Associates, Inc.

Date: November 11, 2025

Subject: *Orland Park, Cook County, Illinois – 159th & LaGrange Commercial Development*
MRDGC Watershed Management Ordinance Wetland Permitting Memorandum

INTRODUCTION

Kimley-Horn was contracted by the Client to permit the proposed wetland impacts associated with the 159th & LaGrange Retail Project. The study area is located at the southwest corner of 159th Street and LaGrange Road in Orland Park, Cook County, IL, identified as Parcel ID 27-21-201-002-0000. The study area is approximately 39-acres in size which consists of cultivated cropland, deciduous forest, pasture, wetland areas, and a small portion of developed land in the northeastern corner.

The purpose of this memorandum is to identify and summarize the wetland permitting requirements applicable to the 159th & LaGrange Retail Project under the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) Watershed Management Ordinance (WMO). This document is intended to guide project design and permitting by clarifying regulatory thresholds, application processes, and mitigation obligations. The analysis focuses exclusively on requirements under the WMO and does not address federal or state wetland regulations. Information presented herein is based on the wetland delineation and field investigation conducted by Kimley-Horn and is intended for use by engineers, planners, and permitting authorities to ensure compliance and support mitigation planning for the proposed development.

STATEMENT OF QUALIFICATIONS:

Sarah Skowronski earned a Bachelor of Science in Integrative Biology at the University of Illinois Urbana-Champaign and a Professional Certificate in Geographic Information Systems from Harper College. She is an environmental scientist with over nine years of experience. She is a registered Professional Wetland Scientist (PWS) through the Society of Wetland Scientists and has extensive experience performing wetland delineations throughout the Midwest region and has prepared environmental permit applications/documentation for public and private sector clients.

NARRATIVE OF AQUATIC RESOURCES:

Utilizing Sections 302 & 603-607 of the MWRDGC WMO, this section seeks to summarize the delineated aquatic resources on site and supplement this information with a narrative of each aquatic resource as described in the Technical Guidance Memo. A Wetland Environment Verification Form is included in **Attachment A**.

A routine level 2 (onsite) wetland delineation, as outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* (January 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (August 2010) occurred on May 28, 2025. The purpose of this delineation was to identify the extent of wetlands within the study area. The information will be used to facilitate project design and determine if aquatic resource impacts are avoidable and/or if minimization of impacts can result from design modifications. In total five (5) isolated wetlands and zero (0) riparian features were identified during the study. A copy of the full Level 2 Delineation Report can be found in **Attachment B** and copies of consultation with the Illinois Department of Natural Resources (IDNR) and the United States Fish & Wildlife Service (USFWS) are included in **Attachment C**.

Per Table 4 listed within Section 604.3 of the WMO, and the presence of Standard Isolated Wetlands and offsite wetlands within 100 feet of the Study Area, this Project needs to address Sections 604.4, 604.5 & 604.6 to satisfy the criteria set forth by the WMO for Development within these aquatic features.

There will be no detention within the delineated resources and stormwater outlets are not proposed to be discharged into the isolated aquatic features, therefore, this project is exempt from Section 604.7 & 604.8. In addition, due to the lack of riparian resources on site, this project is exempt from Section 606 and 607 of the WMO.

A summary of the aquatic resources delineated onsite is presented in **Table 1** below:

Resource ID	Cowardin Classification	Size (acres)	Size to be mitigated (acres)	FQAI	Mean C-Value	Regulatory Status
Wetland 1	PEM1Af	7.53	10.56	9.9	1.8	USACE Non-Jurisdictional: does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). County Regulated: Standard Type; 50-foot associated buffer.
Wetland 2	PSS1C	0.01	N/A	1.3	0.6	USACE non-jurisdictional: does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). County Regulated: Standard Type; No associated buffer.
Wetland 3	PEM1Af	0.1	0.15	1.9	0.7	USACE Non-Jurisdictional: does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). County Regulated: Standard Type; 30-foot associated buffer.
Wetland 4	PEM1C	0.03	N/A	1.3	0.4	USACE Non-Jurisdictional: does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). County Regulated: Standard Type; No associated buffer.

Resource ID	Cowardin Classification	Size (acres)	Size to be mitigated (acres)	FQAI	Mean C-Value	Regulatory Status
Wetland 5	PEM1C	0.23	0.35	1.8	0.8	USACE Non-Jurisdictional: does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). County Regulated: Standard Type; 30-foot associated buffer.

Wetland 1

Wetland 1 is in a depression within an agricultural field in the western portion of the study area that extends off site to the west. The wetland receives water from a culvert in the southwest part of the study area and drains west. The wetland boundary was based on the change in topography and hydrophytic vegetation dominance. The primary role this wetland serves for the surrounding landscape is to facilitate hydrologic functions, including infiltration, evaporation, and evapotranspiration.

Permanent impacts resulting from the development will result in the complete take, excluding a 50-foot buffer on the west end (7.04 acres), of Wetland 1. Being a standard, isolated wetland, permanent impacts to Wetland 1 will be mitigated at a 1.5:1 ratio for a total of 10.56 acres to be mitigated at an approved mitigation bank within the County or the Des Plaines River watershed.

Wetland 2

Wetland 2 is in the northern portion of the study area. The wetland collects runoff from the surrounding landscape and drains south via an erosional feature toward Wetland 3. The wetland boundary was determined based on the change in topography, dominance of hydrophytic vegetation, and presence of hydric soils. The wetland boundary was delineated using a representative upland point. The primary role this wetland serves for the surrounding landscape is to facilitate hydrologic functions, including infiltration, evaporation, and evapotranspiration.

Impacts resulting from the development will result in the complete take (0.01 acres) of Wetland 2. Wetland 2 is exempt from mitigation due to being less than 0.10 acres in size as stated in Section 604.9.A of the WMO.

Wetland 3

Wetland 3 is in the northwestern portion of the study area. The wetland collects runoff from the surrounding landscape and from an erosional channel connecting the Wetland to Wetland 2 to the north. The wetland boundary was based on the change in topography, dominance of hydrophytic vegetation, and the presence of hydric soils. The primary role this wetland serves for the surrounding landscape is to facilitate hydrologic functions, including infiltration, evaporation, and evapotranspiration.

Permanent impacts resulting from the development will result in the complete take (0.1 acres) of Wetland 3. Being a standard, isolated wetland, permanent impacts to Wetland 3 will be mitigated at a 1.5:1 ratio for a total of 0.15 acres to be mitigated at an approved mitigation bank within the County or the Des Plaines River watershed.

Wetland 4

Wetland 4 is in the southeastern portion of the study area. Wetland hydrology and hydrophytic vegetation are sustained by inflow from a culvert located at north end of the Wetland. The wetland boundary was based on the change in topography and the presence of hydric soils. The primary role this wetland serves for the surrounding landscape is to facilitate hydrologic functions, including infiltration, evaporation, and evapotranspiration.

Permanent impacts resulting from the development will result in the complete take (0.03 acres) of Wetland 4. Wetland 4 is exempt from mitigation due to being less than 0.10 acres in size as stated in Section 604.9.A of the WMO.

Wetland 5

Wetland 5 is in the southeastern corner of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography and dominance of hydrophytic vegetation. The primary role this wetland serves for the surrounding landscape is to facilitate hydrologic functions, including infiltration, evaporation, and evapotranspiration.

Permanent impacts resulting from the development will result in the complete take (0.23 acres) of Wetland 5. Being a standard, isolated wetland, permanent impacts to Wetland 5 will be mitigated at a 1.5:1 ratio for a total of 0.35 acres to be mitigated at an approved mitigation bank within the County or the Des Plaines River watershed.

Offsite Wetlands

The limits of Wetland 1 extend offsite to the west of the Study Area. This offsite area is estimated to be roughly 3.88 acres in size, with an estimated total size of Wetland 1 to be 11.41 acres. There is another development project proposed on the parcel to the west that will also affect the offsite portion of Wetland 1. The estimated offsite boundaries can be found in the revised aquatic resources report included in **Attachment B**.

PRACTICABLE ALTERNATIVES ANALYSIS:

The purpose of the proposed 159th & LaGrange Retail Project is to provide commercial services and economic development at the southwest corner of 159th Street and LaGrange Road in Orland Park, Illinois. The 39-acre parcel includes cultivated cropland, deciduous forest, pasture, wetlands, and a small, developed area. Several alternatives were considered to meet the project's objectives while minimizing environmental impacts. *The No Action Alternative* is technically feasible but does not fulfill the project's purpose, resulting in lost economic opportunities for the applicant and community. An *On-Site Avoidance Alternative*, which would involve redesigning the site layout to avoid wetlands, is not practicable due to the constraints of the parcel and regulatory requirements set forth by the Village for stormwater detention and parking. These requirements dictate minimum detention volumes and parking ratios that cannot be met without utilizing the entire parcel, including areas containing wetlands. An *Off-Site Alternative*, relocating the project to another parcel without wetlands, would require property acquisition, additional permitting, and infrastructure development, making it cost-prohibitive and logistically challenging compared to the proposed site.

From an environmental perspective, the No Action Alternative would preserve all wetlands and habitat, avoiding adverse impacts to the aquatic ecosystem. The Off-Site Alternative would avoid impacts at the current site but could disturb other resources elsewhere and increase land disturbance

due to new infrastructure. Given the constraints, the proposed project layout represents the *least environmentally damaging practicable alternative (LEDPA)* because it meets the project purpose and complies with Village requirements while limiting wetland impacts to the minimum necessary for development.

Although avoidance is not possible, the applicant proposes mitigation through design strategies such as permeable pavement, reduced impervious surfaces, and native landscaping to minimize impacts. Additionally, compensatory mitigation will be provided through wetland restoration or creation within the same watershed (Hickory Creek/Des Plaines River) at ratios consistent with regulatory requirements. This approach ensures unavoidable impacts are offset and aquatic ecosystem functions are maintained.

PERMANENT IMPACTS & ASSOCIATED MITIGATION:

A Schedule W for each impacted aquatic resource subject to regulation was prepared and is included in **Attachment D**. Per Section 604.9 and the significant permanent impacts proposed to the isolated, standard wetlands, this Project will be subject to mitigation. In total 7.41 acres of permanent impact is proposed to the five regulated wetlands on site for a total of 11.06 acres of mitigation being needed to satisfy permitting requirements. A wetland and buffer impact exhibit has also been prepared and included in **Attachment D**.

Utilizing Section 605 of the WMO, wetland credits for the total number of mitigation acres described above are being purchased from Thorn Creek Headwaters Mitigation Bank located in University Park, Will County, IL.

PRIOR PERMITTING ACTIVITIES:

A Boundary Verification site visit occurred with the Village Wetland Specialist, Vince Mosca of Hey and Associates, on November 6, 2025, and boundaries were agreed upon. Documentation of the visit is still pending. An Approved Jurisdictional Determination (AJD) was issued by the USACE Chicago District on September 14, 2020. While it is past the five-year validity period, this documentation was determined to be satisfactory to the Village Wetland Specialist. This document has been included in **Attachment E**.

ATTACHMENT A

Wetland Environment Verification Form

WETLAND / RIPARIAN ENVIRONMENT VERIFICATION



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

111 EAST ERIE STREET, CHICAGO, IL 60611
MWRD.org/wmo

INSTRUCTIONS FOR COMPLETING VERIFICATION FORM

This form may only be used for verification of wetlands and/or riparian environments. No work is authorized by this verification approval. Prior to conducting any work, an approved WMO permit must be obtained. Verification approval is valid for a period of five (5) years from the approval date. Submit a \$750 non-refundable fee with this verification.

NAME AND LOCATION OF PROJECT

Name of Project (as shown on plans): 159th & LaGrange Retail
 Location of Project (address or with respect to two major streets): 159th Street & LaGrange Rd
 Municipality (Township, if unincorporated): Orland Park
 PINs (include all, use additional sheet if necessary): 27-21-201-002-000

1. WETLAND VERIFICATION: Per §603.3 of the WMO, an onsite wetland delineation is required.

A. Submit each of the following documents for all onsite and offsite wetlands. The Agricultural Land submittal is not required if the land has not been farmed within the last five (5) years.

- | | |
|---|---|
| 1. Wetland Narrative | 5. For Agricultural Land ^b , National Resources Conservation Service (NRCS) Certified Wetland Determination (within last 5 years) or Farmed Wetland Determination Report by a Wetland Specialist using NRCS procedures |
| 2. Aerial Photo with Wetland Boundary flagged/staked ^a | |
| 3. Wetland Delineation Report from a Wetland Specialist | |
| 4. Correspondence from the U.S. Army Corps of Engineers | |

^a The District can only verify isolated wetlands/waters boundaries. *Waters of the U.S.* boundaries must be verified by the Corps.

^b "Agricultural Land" is land that has been farmed at least one (1) year within the last five (5) years.

B. Use the table below to identify the boundaries, extent, function, and quality of all wetlands to be verified.

WETLAND 1			WETLAND 2			WETLAND 3			WETLAND 4		
Onsite	Offsite	Both	Onsite	Offsite	Both	Onsite	Offsite	Both	Onsite	Offsite	Both
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Size: <u>0.01</u> acres			Size: <u>0.01</u> acres			Size: <u>0.01</u> acres			Size: <u>0.03</u> acres		
Is the wetland exempt from §603.7 requirements? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Is the wetland exempt from §603.7 requirements? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			Is the wetland exempt from §603.7 requirements? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Is the wetland exempt from §603.7 requirements? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
Is the wetland assumed to be Corps Jurisdictional? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Is the wetland assumed to be Corps Jurisdictional? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Is the wetland assumed to be Corps Jurisdictional? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Is the wetland assumed to be Corps Jurisdictional? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
High Quality <input type="checkbox"/>	Standard Quality <input checked="" type="checkbox"/>		High Quality <input type="checkbox"/>	Standard Quality <input checked="" type="checkbox"/>		High Quality <input type="checkbox"/>	Standard Quality <input checked="" type="checkbox"/>		High Quality <input type="checkbox"/>	Standard Quality <input checked="" type="checkbox"/>	

7.53 ac
on site

C. If a Corps Jurisdictional Determination (Corps JD) had not been obtained, describe the status of the Corps JD, including the submission date, if applicable (e.g., JD applied for on 4/7/2022, awaiting response):

LRC-2012-00897 was issued for the subject parcel on Sept 14, 2020 with an AJD of USACE non-jurisdictional.

DISTRICT or AUTHORIZED MUNICIPALITY USE ONLY

Application Received: _____ Permit Issued: _____ Watershed: _____

PERMIT ISSUED BY: DISTRICT Authorized Municipality

WETLAND / RIPARIAN ENVIRONMENT VERIFICATION



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

111 EAST ERIE STREET, CHICAGO, IL 60611
MWRD.org/wmo

INSTRUCTIONS FOR COMPLETING VERIFICATION FORM

This form may only be used for verification of wetlands and/or riparian environments. No work is authorized by this verification approval. Prior to conducting any work, an approved WMO permit must be obtained. Verification approval is valid for a period of five (5) years from the approval date. Submit a \$750 non-refundable fee with this verification.

NAME AND LOCATION OF PROJECT

Name of Project (as shown on plans): Please see Page 1 for project details.

Location of Project (address or with respect to two major streets): _____

Municipality (Township, if unincorporated): _____

PINs (include all, use additional sheet if necessary): _____

1. WETLAND VERIFICATION: Per §603.3 of the WMO, an onsite wetland delineation is required.

A. Submit each of the following documents for all onsite and offsite wetlands. The Agricultural Land submittal is not required if the land has not been farmed within the last five (5) years.

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Wetland Narrative 2. Aerial Photo with Wetland Boundary flagged/staked^a 3. Wetland Delineation Report from a Wetland Specialist 4. Correspondence from the U.S. Army Corps of Engineers | <ol style="list-style-type: none"> 5. For Agricultural Land^b, National Resources Conservation Service (NRCS) Certified Wetland Determination (within last 5 years) or Farmed Wetland Determination Report by a Wetland Specialist using NRCS procedures |
|--|---|

^a The District can only verify isolated wetlands/waters boundaries. *Waters of the U.S.* boundaries must be verified by the Corps.

^b "Agricultural Land" is land that has been farmed at least one (1) year within the last five (5) years.

B. Use the table below to identify the boundaries, extent, function, and quality of all wetlands to be verified.

WETLAND 1			WETLAND 2			WETLAND 3			WETLAND 4		
Onsite	Offsite	Both	Onsite	Offsite	Both	Onsite	Offsite	Both	Onsite	Offsite	Both
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Size: <u>0.23</u> acres			Size: _____ acres			Size: _____ acres			Size: _____ acres		
Is the wetland exempt from §603.7 requirements? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Is the wetland exempt from §603.7 requirements? <input type="checkbox"/> YES <input type="checkbox"/> NO			Is the wetland exempt from §603.7 requirements? <input type="checkbox"/> YES <input type="checkbox"/> NO			Is the wetland exempt from §603.7 requirements? <input type="checkbox"/> YES <input type="checkbox"/> NO		
Is the wetland assumed to be Corps Jurisdictional? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Is the wetland assumed to be Corps Jurisdictional? <input type="checkbox"/> YES <input type="checkbox"/> NO			Is the wetland assumed to be Corps Jurisdictional? <input type="checkbox"/> YES <input type="checkbox"/> NO			Is the wetland assumed to be Corps Jurisdictional? <input type="checkbox"/> YES <input type="checkbox"/> NO		
High Quality <input type="checkbox"/>	Standard Quality <input checked="" type="checkbox"/>		High Quality <input type="checkbox"/>	Standard Quality <input type="checkbox"/>		High Quality <input type="checkbox"/>	Standard Quality <input type="checkbox"/>		High Quality <input type="checkbox"/>	Standard Quality <input type="checkbox"/>	

C. If a Corps Jurisdictional Determination (Corps JD) had not been obtained, describe the status of the Corps JD, including the submission date, if applicable (e.g., JD applied for on 4/7/2022, awaiting response):

DISTRICT or AUTHORIZED MUNICIPALITY USE ONLY

Application Received: _____ Permit Issued: _____ Watershed: _____

PERMIT ISSUED BY: DISTRICT Authorized Municipality

WETLAND / RIPARIAN ENVIRONMENT VERIFICATION

WMO Verification Number: _____

2. RIPARIAN ENVIRONMENT VERIFICATION:

A. Submit each of the following documents for all onsite and offsite wetlands.

1. Riparian Environment Narrative, including the function of the Riparian Environment described in §606.1
2. Aerial Photo with Riparian Environment Boundary flagged/staked^a
3. Correspondence from the U.S. Army Corps of Engineers

^a The District can only verify isolated wetlands/waters boundaries. *Waters of the U.S.* boundaries must be verified by the Corps.

B. Use the table below to identify the stream classification and location of the Riparian Environment to be verified.

RIPARIAN ENVIRONMENT 1					RIPARIAN ENVIRONMENT 2								
<u>Stream Classification</u>													
<u>BSC</u>					<u>BSS</u>								
A	B	C	D	E	A	B	C	A	B	C			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<u>Riparian Environment Boundary Location</u>					<u>Riparian Environment Boundary Location</u>								
30 ft from OHWM		50 ft from OHWM			100 ft from OHWM		30 ft from OHWM		50 ft from OHWM			100 ft from OHWM	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

3. CERTIFICATE BY WETLAND SPECIALIST

I hereby certify that the wetland, wetland buffer, and/or riparian environment submittals along with any supporting documentation regarding the aforementioned project described herein have been reviewed by me and is accurate representation of the current conditions.

Wetland Specialist: Sarah Skowronski Email: sarah.skowronski@ Phone: 224-214-4614
 Company/Agency: Kimley-Horn & Associates kimley-horn.com
 Address: 570 Lake Cook Rd Ste 200 City: Deerfield Zip: 60015
 Signature: [Signature] Date: 11/13/2025

4. REQUESTOR OF WETLAND / RIPARIAN ENVIRONMENT VERIFICATION (IF NOT PROPERTY OWNER)

Requestor: Tom Szafrański Email: tom.szafrański@ Phone: 331-481-7330
 Company/Agency: Kimley-Horn & Associates kimley-horn.com
 Address: 4201 Winfield Rd Ste 600 City: Warrenville Zip: 60555
 Signature: [Signature] Date: 11/17/25

5. CERTIFICATE BY PROPERTY OWNER

By signing below, I am stating that all information provided is correct and has not been altered according to my knowledge. Furthermore, I hereby grant the District and/or their agents right-of-access to the subject property for the purpose of performing the requested wetland, wetland boundary, and/or riparian environment boundary verification. The property owner or their agent is responsible for obtaining right-of-access approvals for the District and/or their agents for any offsite wetlands.

Property Owner: 159th & LaGrange AN IL Email: _____ Phone: _____
 Company/Agency: _____
 Address: 4333 S Pulaski Rd City: Chicago Zip: 60632
 Signature: _____ Date: _____

REVIEW AND APPROVAL BY THE DISTRICT OR AUTHORIZED MUNICIPALITY	
Reviewed by: _____ (Local Sewer Systems) or (Professional Engineer)	Date: _____
Approved by: _____ (For the Director of Engineering) or (Enforcement Officer)	Date: _____

ATTACHMENT B

Level 2 Delineation Report



Wetland Delineation Report

159th & LaGrange Retail

Village of Orland Park

Cook County, Illinois

Prepared for:

159th & LaGrange Retail
15901 LaGrange Road,
Orland Park IL 60467

Prepared by:

Kimley-Horn and Associates, Inc.
570 Lake Cook Rd, Suite 200
Deerfield, IL 60015

July 2025

Revised November 2025

Kimley»»Horn



Table of Contents

1	Introduction	1
2	Project Description	1
3	Statement of Qualifications	1
4	Regulatory Requirements	2
4.1	State and Federal Regulations	2
4.2	Local Regulations	2
5	Mapping and Background Information	3
5.1	Topography	3
5.2	National Wetlands Inventory	3
5.3	National Hydrography Dataset	3
5.4	IDNR Public Waters	3
5.5	Soil Survey	3
5.6	Federal Emergency Management Agency Floodplain	4
5.7	Aerial Photography Review	4
5.8	Precipitation	4
6	Field Investigation	4
7	Summary of Results	6
8	Report Preparation	9
9	Conclusion	9
10	Disclaimer	9
	References	10

List of Tables

Table 1: Wetland Delineation Summary	6
Table 2: Delineated Linear Feature Summary	10

List of Figures

- Figure 1. Project Location
- Figure 2. USGS Topographic Map
- Figure 3. NWI, NHD, NRCS, 2-ft Contours
- Figure 4. Hydric Soils Rating
- Figure 5. FEMA 100-Year Floodplain
- Figure 6. Delineation Summary

Appendices

- Appendix A: Hydric Soils Information
- Appendix B: Historic Aerial Review
- Appendix C: Precipitation Data
- Appendix D: Field Data Sheets
- Appendix E: Photos
- Appendix F: FQI Index

1 Introduction

Wetland scientist Sarah Skowronski with Kimley-Horn and Associates, Inc. (Kimley-Horn) conducted a wetland investigation and field delineation for the 159th & LaGrange Retail Project in the Village of Orland Park, Cook County, Illinois. The wetland investigation and delineation included approximately 39 acres of land, with Parcel ID 27-21-201-002-0000 hereby referenced as the “study area”. The study area is shown in **Figure 1**. The study area consists of undeveloped agricultural land, wetland, and forested areas with impervious land located in the northeastern corner. Cover types within the study area include open water, cultivated cropland, developed land, grassland, deciduous forest, scrub/shrubland, woody wetlands and emergent herbaceous wetlands.

A routine level 2 (onsite) wetland delineation, as outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* (January 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (August 2010) occurred on May 28, 2025. The purpose of this delineation was to identify the extent of wetlands within the study area. The information will be used to facilitate project design and determine if aquatic resource impacts are avoidable and/or if minimization of impacts can result from design modifications.

2 Project Description

The 159th & LaGrange Retail Project is proposing a large retail development. The project will primarily consist of one large retail space and associated parking, loading and docking area, and stormwater detention areas.

3 Statement of Qualifications

Kimley-Horn has extensive experience completing wetland investigations and delineations across the United States. Kimley-Horn’s personnel has been trained to use the *1987 Corps of Engineers Wetlands Delineation Manual (USACE, 1987)* along with the applicable regional supplements. Kimley-Horn has experience completing off-site hydrology analysis, historic aerial reviews, and difficult or atypical situation delineations.

Sarah Skowronski earned a Bachelor of Science in Integrative Biology at the University of Illinois Urbana-Champaign and a Professional Certificate in Geographic Information Systems from Harper College. She is an environmental scientist with over eight years of experience. She is a registered Professional Wetland Scientist (PWS) through the Society of Wetland Scientists and has extensive experience performing wetland delineations throughout the Midwest region and has prepared environmental permit applications/documentation for public and private sector clients. Sarah is a Certified Wetland Specialist in Lake County, McHenry County, and Kane County.

Ian Van Wazer earned a Bachelor of Science Degree in Natural Resources and Environmental Science from Purdue University and a Professional Certificate in Geographic Information Systems from Harper College. He is an environmental scientist who specializes in wetland delineation, geographic information systems mapping, NEPA, and tree surveys. He has experience in the delineation of agricultural fields, roadway corridors, and undeveloped areas for future development and transit projects. He is proficient using ArcGIS to produce client specific exhibits for various project types.

Rose Kirch is a going into her senior year of college seeking a Bachelor of Science Degree in Environmental Science, Policy, and Management, along with minors in Sustainability Studies and Corporate Environmental Management at the University of Minnesota. She has experience with GIS mapping, research, and field work in Minnesota and Wisconsin.

4 Regulatory Requirements

A summary of the permit requirements that may pertain to the project is provided below. Any activity planned within areas identified as wetland must be coordinated with and approved by the appropriate agencies prior to commencement of such activities.

4.1 State and Federal Regulations

The regulatory authority of the U.S. Army Corps of Engineers (USACE) covers Waters of the United States (WOTUS) in accordance with Section 404 of the Clean Water Act (CWA). Generally, the USACE reviews delineations to determine whether wetlands are jurisdictional (i.e., WOTUS). On March 12, 2025, the U.S. Environmental Protection Agency (EPA) and Department of the Army (“the agencies”) announced a joint memorandum issuing guidance to field staff on implementation of the continuous surface connection requirement under the CWA. The final ruling is pending as of the date of this report.

Based on the March 2025 ruling, the Clean Waters Act’s use of “waters” encompasses only relatively permanent, standing, or continuously flowing bodies, ordinarily called streams, oceans, rivers, and lakes. Wetlands qualify as WOTUS only if “indistinguishable from waters of the United States,” having a continuous surface connection to bodies that are waters of the United States in their own right, with no clear division between waters and wetlands. USACE retains the authority to make final decisions regarding federal jurisdiction of aquatic resources. Obtaining a jurisdictional determination (JD) from the USACE clarifies the scope of federal jurisdiction over delineated aquatic resources and identifies which resources are subject to CWA regulations.

Section 10 of the Rivers and Harbors Act requires that regulated activities conducted below the ordinary high-water mark elevation of navigable Waters of the U.S. or mean high water mark for tidal waters be approved/permitted by the USACE. Regulated activities include the placement/removal of structures, work involving dredging, disposal of dredged material, filling, excavation, or any other disturbance of soils/sediments or modification of a navigable waterway. Navigable Waters of the U.S. are those waters that are subject to the ebb and flow of the tide shoreward to the mean high-water mark and/or are presently used or have been used in the past or may be susceptible to use to transport interstate or foreign commerce.

At this time, Illinois does not regulate wetlands under Section 404 or require setback buffers for wetlands on private land.

4.2 Local Regulations

According to the Village of Orland Park’s Land Development Code Section 6-413, development within 50 feet of any wetland—whether mapped or field-delineated—is subject to regulation under the Land Development Code. The Village follows a “no net loss” policy, requiring that wetland impacts be avoided whenever possible, and only permitted when no practicable alternatives exist and the project serves the public interest. Any unavoidable wetland impacts must be mitigated through restoration or creation to maintain ecological function. Activities that impair wetland functions such as habitat value, water quality, or groundwater recharge are prohibited, and any proposed work within the 50-foot buffer—such as grading, filling, or vegetation removal—requires a permit from the Village. Wetland boundaries must be identified through both Village mapping and on-site delineation and clearly shown on development plans.

The Metropolitan Water Reclamation District (MWRD) regulates isolated wetlands in Cook County under the Watershed Management Ordinance. According to Codes 606.2A and 606.2B, no buffer is required for isolated wetlands that are 0.1 acre or smaller. A 30-foot buffer is required for standard isolated wetlands less than 0.5 acre, while a 50-foot buffer is required for those larger than 0.5 acre. Standard isolated streams require a 30-foot buffer, and U.S. Army Corps of Engineers (USACE) jurisdictional streams require a 50-foot buffer. A Watershed Management Permit is required for any impacts to both isolated and USACE-jurisdictional wetlands. However, impacts to standard isolated wetlands that are less than 0.1 acre in aggregate do not require mitigation.

5 Mapping and Background Information

Prior to field reconnaissance, potential wetland areas within the project study area were identified through a desktop review of United States Geological Survey (USGS) topographic maps, National Wetlands Inventory (NWI), National Hydrography Dataset (NHD), Illinois Department of Natural Resources (IDNR) Public Waters database, LiDAR data, the soil survey for Cook County, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), aerial photography, and antecedent precipitation data for a location near the study area. The selected resources are described below:

5.1 Topography

The Orland Park, IL 7.5-minute USGS topographic map and 2-foot contours derived from a digital elevation model (DEM) from USGS were reviewed for the study area. According to the USGS topographic map (see **Figure 2**), the study area is depicted as primarily undeveloped land with one structure located the northeastern portion of the study area. The 2-foot contour data depicts the study area generally sloping to the west and south from a collection of hills in the northeast portion. The study area ranges from 676 feet (above mean sea level) to 758 feet, see **Figure 3**.

5.2 National Wetlands Inventory

NWI mapping, available from the U.S. Fish and Wildlife Service (USFWS) Wetland Mapper (updated in 2024), depicts potential wetland areas and waterbodies based on stereoscopic analysis of high altitude and aerial photographs and was reviewed for the study area. According to the NWI map, there are two freshwater emergent wetlands (PEM1C), located in the southeast and west portions of the study area, see **Figure 3**.

5.3 National Hydrography Dataset

The NHD, available from USGS, depicts drainage networks and related features, including rivers, streams, canals, lakes, and ponds. The NHD dataset is not field verified. According to NHD mapping, there are no flowline features and no waterbodies mapped within the study area, see **Figure 3**.

5.4 IDNR Public Waters

The IDNR Public Waters viewer depicts IDNR Public Waters. According to the Public Waters viewer, there are no Public Waters within the study area or the vicinity of the study area.

5.5 Soil Survey

The Natural Resources Conservation Service's (NRCS) *Web Soil Survey* for Cook County was reviewed for the study area. According to the survey, there are nine soil mapping units within the study area which are generally silt loams and silty clay loams, with some clay. Approximately 23% of the study area was mapped with soil with a predominantly hydric soil rating of 97% and approximately 35% of the study area was mapped with soil with a predominantly non-hydric soil rating of 6-8%. The remainder of the study area

was mapped with a non-hydric soil rating of 0%. Maps and information obtained from the NRCS online web soil survey are included in **Figure 4** and **Appendix A**.

5.6 Federal Emergency Management Agency Floodplain

The FEMA FIRM was reviewed for the study area. According to FEMA, the study area is located in Zone X of panel 17031C0701J (effective August 19, 2008), which is outside the designated 100-year floodplain zone, see **Figure 5**.

5.7 Aerial Photography Review

Farm Service Agency (FSA) aerial photo compliance slides, acquired from the Will-South Cook Soil and Water Conservation District (SWCD), were reviewed to identify the potential for wetlands across the study area. Eight photos were reviewed between 1991 and 2001, available in **Appendix B**. These photos were used to determine the presence of wetland hydrology signatures utilizing the NRCS accepted methodology for farmed wetland determinations. Wetland signatures were identified in the primary wet year (1996) utilizing imagery from 1993 and 1999 as secondary years, each dry year image was interpreted for the presence or lack of the identified wetland signatures.

One area of interest (AOI) showed several wetland signatures (soil saturation, crop stress, non-cropped areas) during a wetter than average year (1996). After further review of five years of aerial imagery with normal precipitation, one Potential Farmed Wetland (PFW) was identified in the study area. Wetland signatures and the analysis table are shown in **Appendix B**.

5.8 Precipitation

The NRCS Climate Analysis for Wetlands Tables (WETS Tables) were developed to define the normal range for monthly precipitation to assess the climatic characteristics for a geographic area over a representative time period and if conditions during a specified time could be considered as normal, dry or wet. WETS tables were prepared for the eight years of historical imagery analyzed as well as for the date the field delineation was conducted. Ninety-day rolling precipitation levels leading up to the field review were compared to historical data. In summary, the field visit constituted normal precipitation conditions. This information is included in **Appendix C**.

6 Field Investigation

A routine level 2 (onsite) wetland delineation, as outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* (January 1987) along with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (August 2010) occurred on May 28, 2025.

During the onsite delineation, vegetation, soils, and current hydrologic characteristics were evaluated at each wetland area and area of investigation identified within the study area. Wetland boundaries were digitally recorded with a GPS with sub-meter accuracy until one or more of the three criteria were no longer present. The sample point locations, wetland boundaries, and aquatic resources are shown in **Figure 6**.

In addition to wetlands that were investigated and delineated, non-wetland aquatic features were sought but none were delineated. Non-wetland aquatic features are defined based on the observation of the following characteristics:

- Flow
 - Perennial: contains water at all times of the year except during extreme drought
 - Intermittent: contains water occasionally or seasonally
 - Ephemeral: contains water only during and immediately after periods of rainfall or snowmelt
- Ordinary High Water Mark (OHWM): The limit line on the shore established by the fluctuation of the water surface. It is shown by such things as a clear line impressed on the bank, shelving,

changes in soil character, destruction of terrestrial vegetation, the presence of litter and debris, or other features influenced by the surrounding area

- Bank Shape
 - Undercut: banks that overhang the stream channel
 - Steep: bank slope of approximately greater than 30 degrees
 - Gradual: bank slope of approximately 30 degrees or less

Sample points were completed for all observed wetlands. Historic aeriels were reviewed for sample points taken in agricultural fields. The field data sheets are included in **Appendix D**. Study area photos and a photo locations map can be found in **Appendix E**.

7 Summary of Results

Resource ID	Wetland Plant Community	Cowardin Classification ¹	Size (acres) ²	NWI?	Hydric Soils? ³	Photo ID	FQAI (all species)	Native Mean C-value	Associated Sample Points	NOTES	Regulatory Status ⁴
Wetlands											
Wetland 1	Seasonally Flooded Basin	PEM1Af	7.53 (on site) Approx. 11.41 (total)	No	Yes	5, 6	9.9	2.8	SP-6 (Wet), SP-7 (Up), SP-8 (Wet) SP-9 (Up) SP-10 (Up)	Wetland 1 is located in a depression within an agricultural field in the western portion of the study area that extends off site to the west. The wetland receives water from a culvert in the southwest part of the study area and drains off-site to the west. The wetland boundary was based on the change in topography and hydrophytic vegetation dominance.	USACE Non-Jurisdictional: does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). County Regulated; 50-foot associated buffer.
Wetland 2	Palustrine Scrub-Shrub	PSS1C	0.01	No	Yes	7, 8	1.3	3.0	SP-1 (Up) SP-3 (Wet)	Wetland 2 is located in the northern portion of the study area. The wetland collects runoff from the surrounding landscape and drains south via an erosional feature toward Wetland 3. The wetland boundary was determined based on the change in topography, dominance of hydrophytic vegetation, and presence of hydric soils. The wetland boundary was delineated using representative upland point SP-1.	USACE non-jurisdictional: does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). County Regulated; No associated buffer.

¹ The Cowardin Classification System codes are found here:

https://doee.dc.gov/sites/default/files/dc/sites/ddoe/release_content/attachments/Appendix%20H_Cowardin%20Classification%20Diagram.pdf

² Size of wetland features and additional areas investigated provided in acres within the study area.

³ Areas identified as hydric contain partially hydric soils (equal to or greater than 33% of soil component) mapped within the resource area.

⁴ Regulatory Status is based on best professional judgment and has not been verified with agency staff.

Resource ID	Wetland Plant Community	Cowardin Classification ¹	Size (acres) ²	NWI?	Hydric Soils? ³	Photo ID	FQAI (all species)	Native Mean C-value	Associated Sample Points	NOTES	Regulatory Status ⁴
Wetland 3	Seasonally Flooded Basin	PEM1Af	0.1	No	Yes	9	1.9	1.3	SP-4 (Up) SP-5 (Wet)	Wetland 3 is located in the northwestern portion of the study area. The wetland collects runoff from the surrounding landscape and from an erosional channel connecting the Wetland to Wetland 2 to the north. The wetland boundary was based on the change in topography, dominance of hydrophytic vegetation, and the presence of hydric soils.	USACE Non-Jurisdictional: does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). County Regulated; 30-foot associated buffer.
Wetland 4	Freshwater Emergent Wetland	PEM1C	0.03	N/A	Yes	10	1.3	1.0	SP-13 (Wet) SP-14 (Up)	Wetland is located in the southeastern portion of the study area. Wetland hydrology and hydrophytic vegetation are sustained by inflow from a culvert located at north end of the Wetland. The wetland boundary was based on the change in topography and the presence of hydric soils.	USACE Non-Jurisdictional: does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). County Regulated: No associated buffer.
Wetland 5	Freshwater Emergent Wetland	PEM1C	0.23	No	Yes	11, 12	1.8	2.0	SP-11 (Up) SP-12 (Wet)	Wetland is located in the southeastern corner of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography and dominance of hydrophytic vegetation.	USACE Non-Jurisdictional: does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). County Regulated: 30-foot associated buffer.

Table 2: Linear Feature Delineation Summary

Resource ID	Cowardin Classification	Size (linear feet) ⁵	NWI?	Photo ID	NOTES	Regulatory Status ⁶
Non-Aquatic Linear Features						
Erosional Feature 1	-	280	-	5	Erosional feature identified in the northcentral portion of the study area perpendicular to West 159 th St.	USACE Non-Jurisdictional: does not connect to a TNW or meet the definition of an RPW. The feature lacked an OHWM and/or a bed and bank.
Erosional Feature 2	-	413	-	3	Erosional feature identified in the northeast portion of the study area perpendicular to West 159 th St.	USACE Non-Jurisdictional: does not connect to a TNW or meet the definition of an RPW. The feature lacked an OHWM and/or a bed and bank.

Floristic Quality Assessment Index (All Species)

The Chicago Region Floristic Quality Assessment Index for All Species (FQAI) from the Chicago District USACE quantifies the quality of species within a particular wetland. The index is calculated off species richness and the quality of the species present utilizing their associated mean C-Value (coefficient of conservatism) ranging from 0 to 10, with 0 being the lowest quality score and 10 being the highest quality score. The 159th & LaGrange Retail delineation describes 5 wetlands including their associated native plants C-value. **See Appendix F** for the FQAI reports for each wetland. The Metropolitan Water Reclamation District defines High Quality Aquatic Resources (HQARs) as those with FQAI values greater than 20 or a native mean c-value of 3.5 or greater. Using these metrics, none of the wetlands present on site qualify as a HQAR.

⁵ Size of non-wetland, linear features provided in linear feet within the study area.

⁶ Regulatory Status is based on best professional judgment and has not been verified with agency staff.

8 Report Preparation

The procedures followed for this wetland delineation are in accordance with the *Corps of Engineers Wetlands Delineation Manual* and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (August 2010).

This report describes study area conditions for a specific date in time and is generally valid for a period of five years from the date of the final field investigation and delineation, which was May 28, 2025.

9 Conclusion

The field delineation identified five wetlands and two erosional features within the study area. Each of the delineated resources is described in **Table 1** and **Table 2**. None of these features are anticipated to be United States Army Corps of Engineers-jurisdictional but are regulated under the authority of the Metropolitan Water Reclamation District of the Greater Chicagoland as stated in Cook County Watershed Management Ordinance; Code 606.2A and 606.2B and Orland Park Land Development Code Section 6-413.

10 Disclaimer

Kimley-Horn has prepared this document based on limited field observations and our interpretation, as scientists, of applicable regulations and agency guidance. While Kimley-Horn believes our interpretation to be accurate, final authority to interpret the regulations lies with the appropriate regulatory agencies. Regulatory agencies occasionally issue guidance that changes the interpretation of published regulations. Guidance issued after the date of this report has the potential to invalidate our conclusions and/or recommendations and may cause a need to reevaluate our conclusions and/or recommendations.

Because Kimley-Horn has no regulatory authority, the Client understands that proceeding based solely upon this document does not protect the Client from potential sanction or fines from the applicable regulatory agencies. The Client acknowledges that they have the opportunity to submit documentation to the regulatory agencies for concurrence prior to proceeding with any work. If the Client elects not to do so, then the Client proceeds at their sole risk.

References

- ESRI, Maxar, Earthstar Geographics, and the GIS User Community. *Imagery Map Hybrid*. Available at <https://www.arcgis.com/home/item.html?id=86265e5a4bbb4187a59719cf134e0018>, accessed July 2025.
- Federal Emergency Management Agency. *Flood Insurance Rate Maps*. Available at <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>, accessed July 2025.
- Illinois Department of Natural Resources. *Public Waters*. Available at <https://idnr.maps.arcgis.com/apps/webappviewer/index.html?id=b64decfb69504164a46badb2841ebb11>, accessed July 2025.
- McHenry County. *Code of Ordinances*. Accessed at [Code of Ordinances | McHenry County, IL](#), accessed July 2025.
- Natural Resources Conservation Service, U.S. Department of Agriculture. *Web Soil Survey*. Available at <http://websoilsurvey.nrcs.usda.gov>, accessed July 2025.
- Natural Resources Conservation Service *1998 Wetland Mapping Conventions Memorandum*. Available at https://efotg.sc.egov.usda.gov/references/delete/2015-6-7/Archived_IL_Mapping_Conventions_150623.pdf
- U.S. Army Corps of Engineers. *Antecedent Precipitation Tool*. Available at <https://www.epa.gov/wotus/antecedent-precipitation-tool-apt>, accessed July 2025.
- United States Department of Agriculture Natural Resources Conservation Service. *NRCS Online Climate Data Retrieval System Wets Tables*. Available at <https://agacis.rcc-acis.org>, accessed July 2025.
- U.S. Army Corps of Engineers. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. January 1987. Available at <http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/1987%20Manual.pdf>.
- U.S. Army Corps of Engineers. *National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams: Final Version (January 2025)*. Available at <https://erdc-library.erdcren.dren.mil/items/76c61f8f-6d75-4a35-aaf3-39aa64918afb>
- U.S. Army Corps of Engineers. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (August 2010)*. Available at http://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/reg_supp/.
- U.S. Fish and Wildlife Service. *Wetlands Online Mapper*. National Wetland Inventory mapping. Available at <http://www.fws.gov/wetlands/Data/Mapper.html>, accessed July 2025.
- U.S. Department of Agriculture. *National Agricultural Imagery Program*. Acquired at https://datagateway.nrcs.usda.gov/GDGHome_DirectDownload.aspx, accessed July 2025.
- U.S. Geological Survey. *LiDAR Data*. Acquired via [The National Map](#), accessed July 2025.
- U.S. Geological Survey. *National Hydrography Dataset*. Acquired via The National Map at <https://apps.nationalmap.gov/downloader/#/>, accessed July 2025.
- U.S. Geological Survey. *Topographical Map*. Accessed via ESRI at <http://www.arcgis.com/home/item.html?id=30e5fe3149c34df1ba922e6f5bbf808f> and via Topo View at <https://ngmdb.usgs.gov/topoview/viewer/#4/40.01/-100.06>, accessed July 2025.

Figures

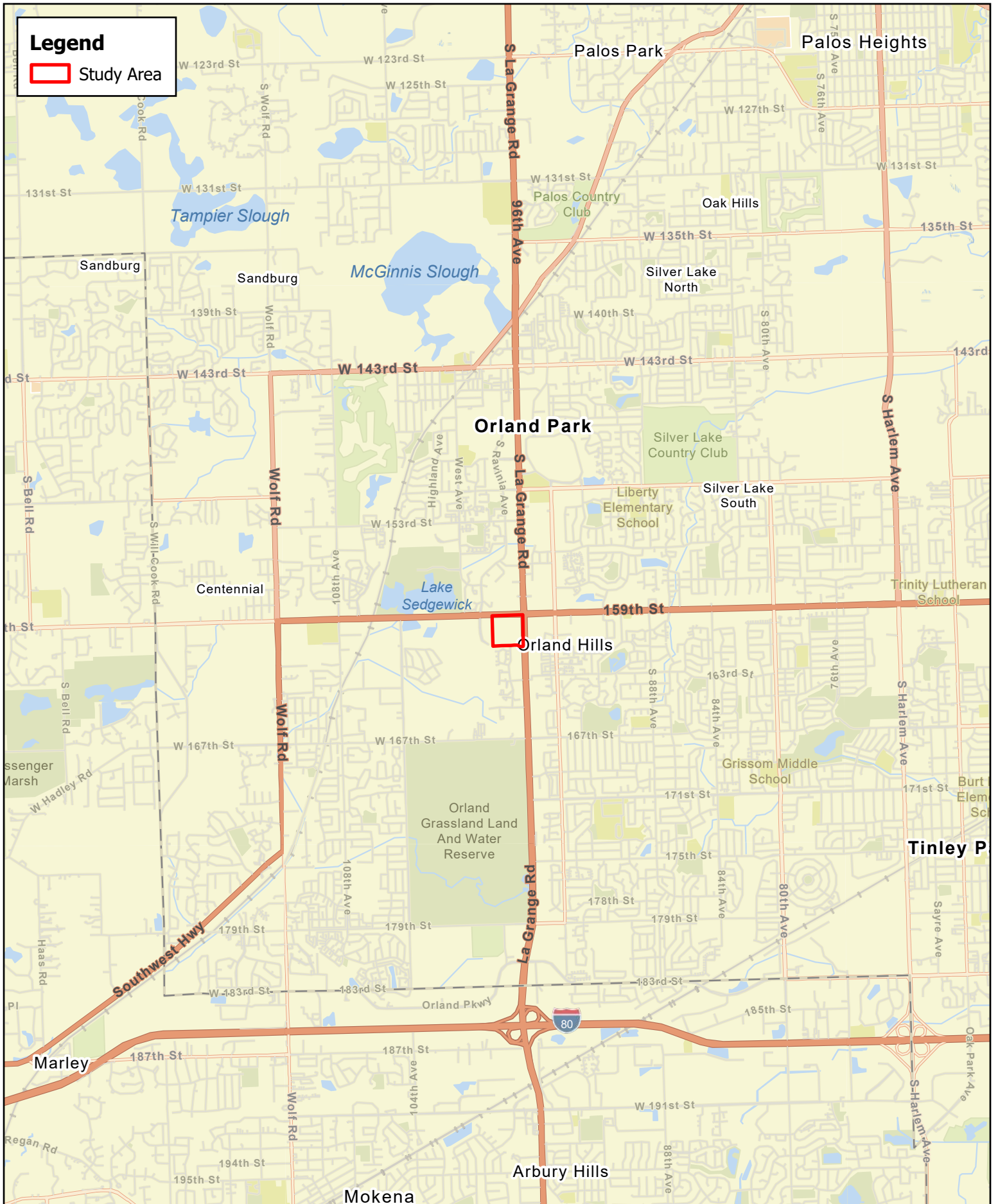
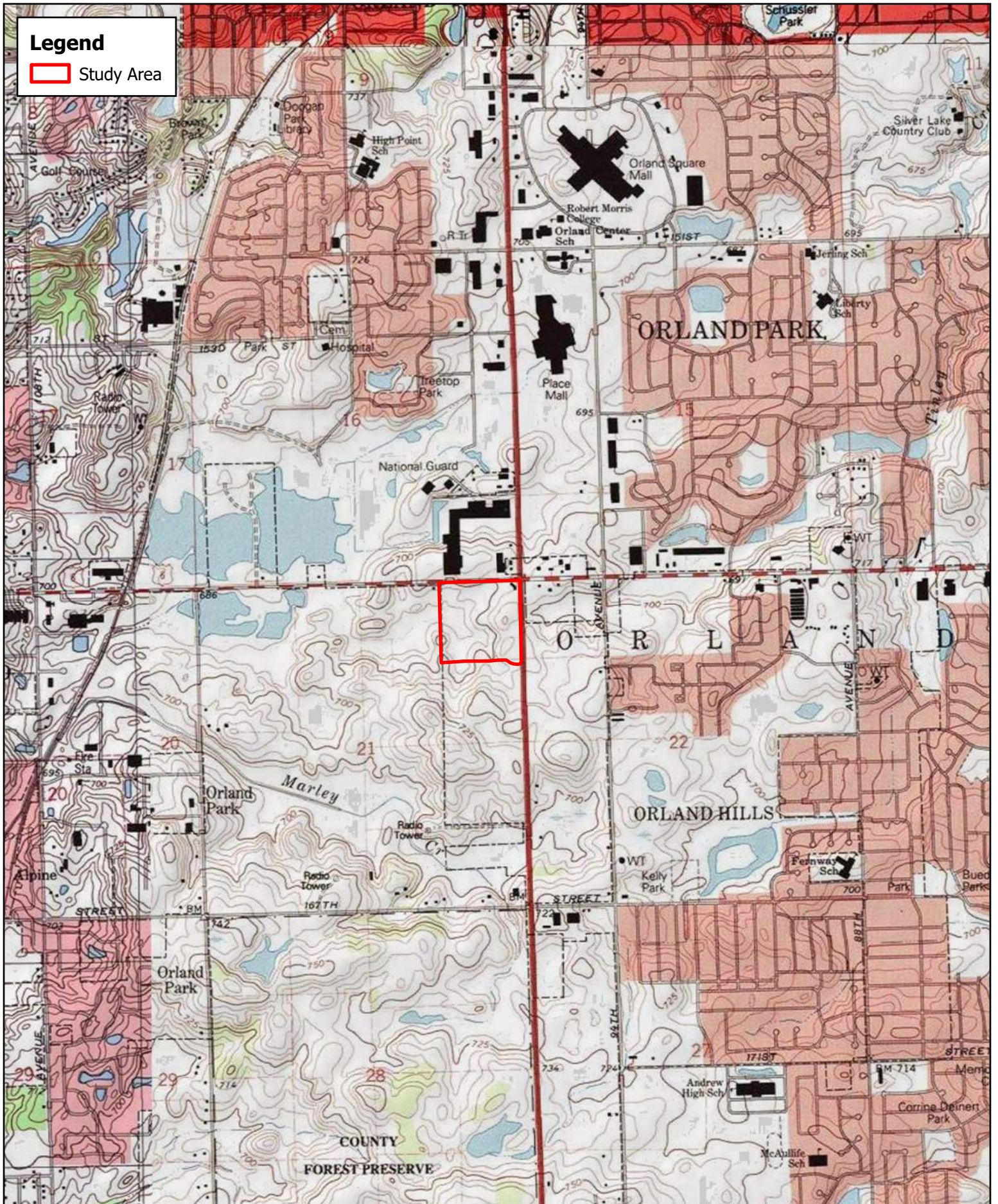


Figure 1. Project Location
 Village of Orland Park, Cook County
 159th & LaGrange Retail



Legend
 Study Area

Figure 2. USGS Topographic Map
 Village of Orland Park, Cook County
 159th & LaGrange Retail

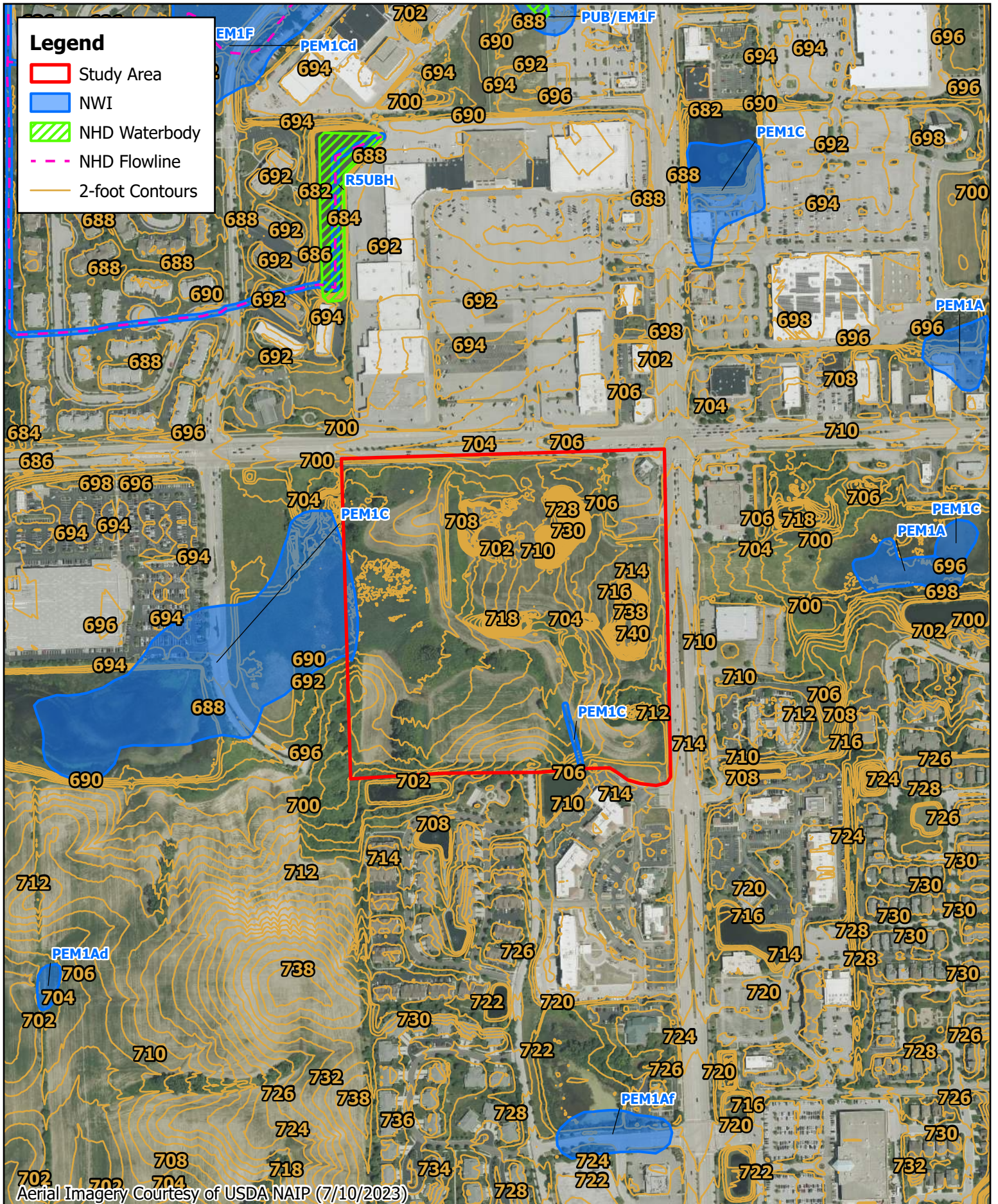
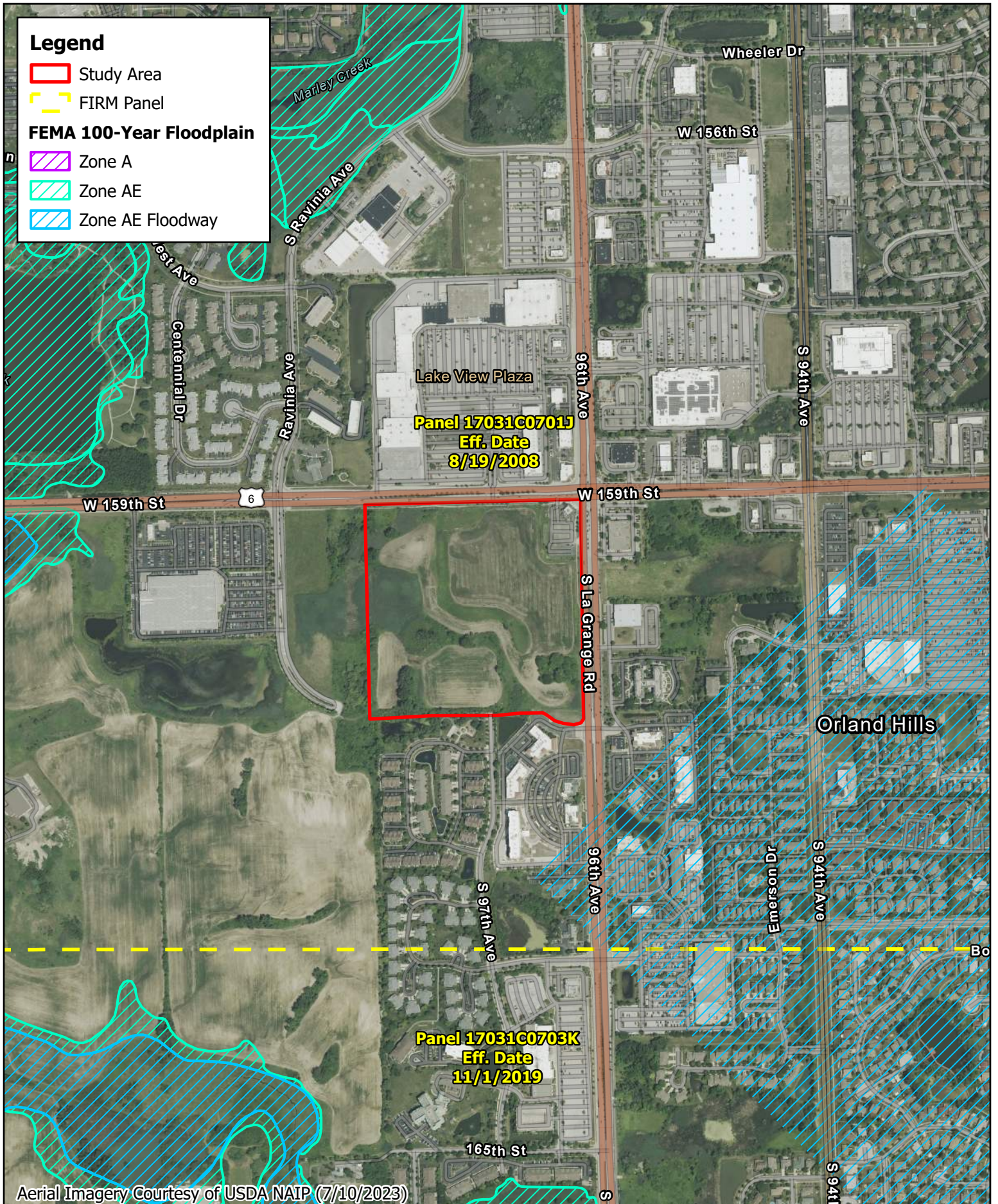


Figure 3. NWI, NHD, 2-Ft Contours
 Village of Orland Park, Cook County
 159th & LaGrange Retail



Legend

- Study Area
- FIRM Panel

FEMA 100-Year Floodplain

- Zone A
- Zone AE
- Zone AE Floodway

Lake View Plaza
Panel 17031C0701J
Eff. Date
8/19/2008

Panel 17031C0703K
Eff. Date
11/1/2019

Aerial Imagery Courtesy of USDA NAIP (7/10/2023)

Figure 5. FEMA 100-Year Floodplain
 Village of Orland Park, Cook County
 159th & LaGrange Retail

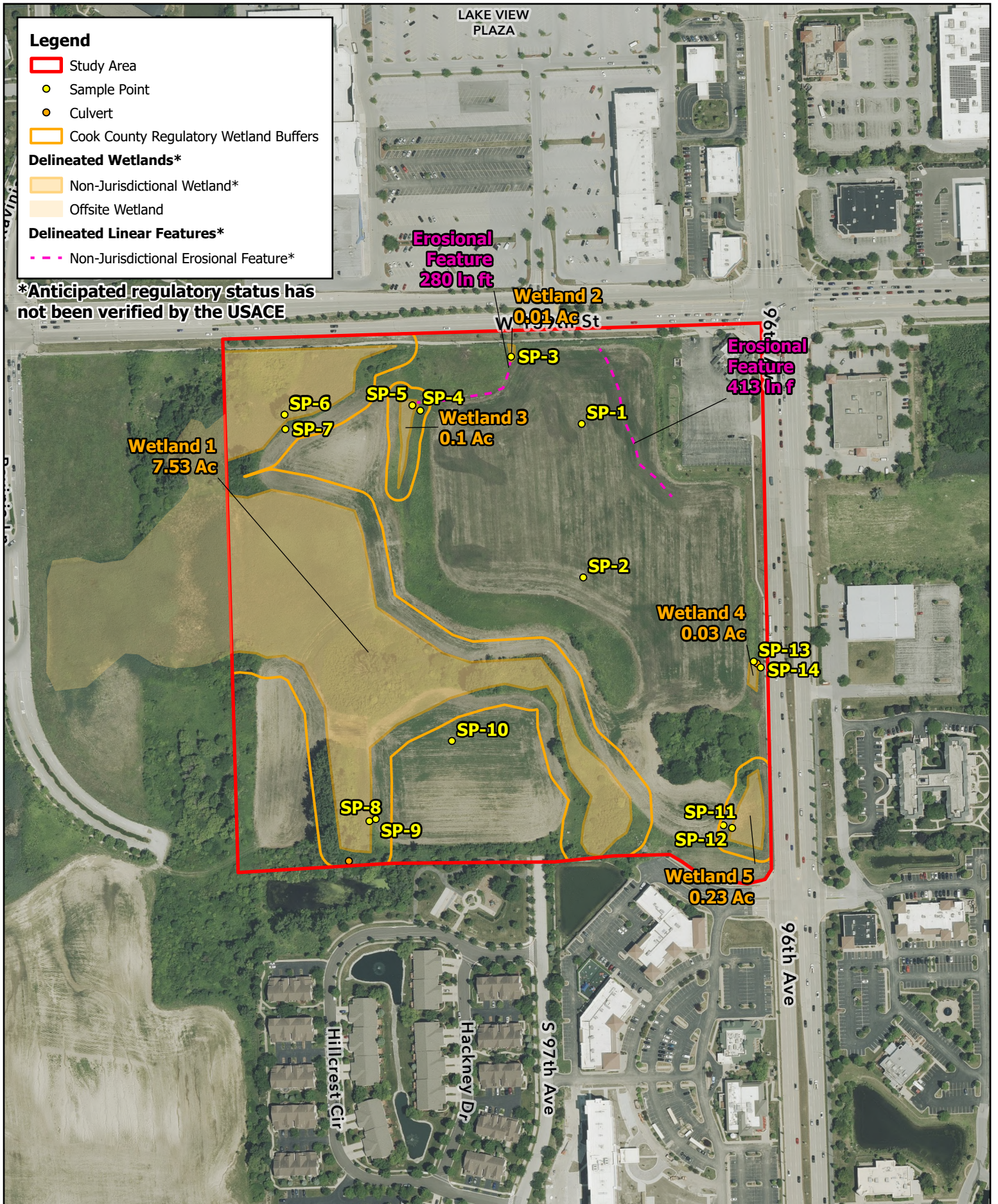


Figure 6. Delineated Resources Map
 Village of Orland Park, Cook County
 159th & LaGrange Retail

Appendix A: Hydric Soils Information

Custom Soil Resource Report Map—Hydric Rating by Map Unit




Map Scale: 1:3,130 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84







MAP LEGEND

Area of Interest (AOI)







 Area of Interest (AOI)

Soils







Soil Rating Polygons

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available






Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cook County, Illinois
 Survey Area Data: Version 18, Aug 21, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 7, 2020—Oct 13, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
228C2	Nappanee silty clay loam, 4 to 6 percent slopes, eroded	6	0.2	0.6%
232A	Ashkum silty clay loam, 0 to 2 percent slopes	97	7.9	20.2%
235A	Bryce silty clay, 0 to 2 percent slopes	97	1.0	2.5%
298B	Beecher silt loam, 2 to 4 percent slopes	6	12.1	31.1%
320B	Frankfort silt loam, 2 to 4 percent slopes	6	0.1	0.2%
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	0	0.8	2.1%
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	0	15.6	40.1%
531C2	Markham silt loam, 4 to 6 percent slopes, eroded	6	0.0	0.0%
805B	Orthents, clayey, undulating	8	1.3	3.2%
Totals for Area of Interest			38.9	100.0%

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Percent Present

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Percent Present" returns the cumulative percent composition of all components of a map unit for which a certain condition is true. For example, attribute "Hydric Rating by Map Unit" returns the cumulative percent

Custom Soil Resource Report

composition of all components of a map unit where the corresponding hydric rating is "Yes". Conditions may be simple or complex. At runtime, the user may be able to specify all, some or none of the conditions in question.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report


United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Appendix B: Historic Aerial Review

Legend


 Study Area

 Historic AOI



Aerial Imagery Courtesy of South Cook-Will County

Legend


 Study Area

 Historic AOI



Aerial Imagery Courtesy of South Cook-Will County

Legend

 Study Area

 Historic AOI



Aerial Imagery Courtesy of South Cook-Will County

Legend


Study Area

Historic AOI



Aerial Imagery Courtesy of South Cook-Will County

Legend


 Study Area

 Historic AOI



Aerial Imagery Courtesy of South Cook-Will County

Legend


 Study Area

 Historic AOI



Aerial Imagery Courtesy of South Cook-Will County

Legend


 Study Area

 Historic AOI



Aerial Imagery Courtesy of South Cook-Will County

Legend

 Study Area

 Historic AOI



Aerial Imagery Courtesy of South Cook-Will County

Appendix C: Precipitation Data

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	7/1/2025	Landowner/Project	WFM AMZ
Weather Station	O'Hare International Airport, IL	State	IL
County	Cook	Growing Season	Yes
Photo/obs Date	1991	Soil Name	N/A

shaded cells are locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	May	2.20	4.12	5.2	W	3	3	9
2nd Prior Month*	April	2.70	4.42	4	N	2	2	4
3rd Prior Month*	March	1.77	3.16	3.54	W	3	1	3
Sum								16

*compared to photo/observation date

Note: If sum is
6 - 9 prior period has been drier than normal
10 - 14 prior period has been normal
15 - 18 prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: prior period has been wetter than normal

**NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19**

Date	7/1/2025	Landowner/Project	WFM AMZ
Weather Station	O'Hare International Airport, IL	State	IL
County	Cook	Growing Season	Yes
Photo/obs Date	1993	Soil Name	N/A

shaded cells are locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	May	2.20	4.12	1.83	D	1	3	3
2nd Prior Month*	April	2.70	4.42	4.57	W	3	2	6
3rd Prior Month*	March	1.77	3.16	4.52	W	3	1	3
Sum								12

*compared to photo/observation date

Note: If sum is
6 - 9 prior period has been drier than normal
10 - 14 prior period has been normal
15 - 18 prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: prior period has been normal

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	7/1/2025	Landowner/Project	WFM AMZ
Weather Station	O'Hare International Airport, IL	State	IL
County	Cook	Growing Season	Yes
Photo/obs Date	1994	Soil Name	N/A

shaded cells are locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	May	2.20	4.12	0.58	D	1	3	3
2nd Prior Month*	April	2.70	4.42	2.2	D	1	2	2
3rd Prior Month*	March	1.77	3.16	1.09	D	1	1	1
							Sum	6

*compared to photo/observation date

Note: If sum is
6 - 9 prior period has been drier than normal
10 - 14 prior period has been normal
15 - 18 prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: prior period has been drier than normal

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	7/1/2025	Landowner/Project	WFM AMZ
Weather Station	O'Hare International Airport, IL	State	IL
County	Cook	Growing Season	Yes
Photo/obs Date	1996	Soil Name	N/A

shaded cells are locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	May	2.20	4.12	6.95	W	3	3	9
2nd Prior Month*	April	2.70	4.42	2.59	D	1	2	2
3rd Prior Month*	March	1.77	3.16	0.95	D	1	1	1
Sum								12

*compared to photo/observation date

Note: If sum is
6 - 9 prior period has been drier than normal
10 - 14 prior period has been normal
15 - 18 prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: prior period has been normal

**NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19**

Date	7/1/2025	Landowner/Project	WFM AMZ
Weather Station	O'Hare International Airport, IL	State	IL
County	Cook	Growing Season	Yes
Photo/obs Date	1998	Soil Name	N/A

shaded cells are locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	May	2.20	4.12	3.02	N	2	3	6
2nd Prior Month*	April	2.70	4.42	3.56	N	2	2	4
3rd Prior Month*	March	1.77	3.16	4.29	W	3	1	3
Sum								13

*compared to photo/observation date

Note: If sum is
6 - 9 prior period has been drier than normal
10 - 14 prior period has been normal
15 - 18 prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: prior period has been normal

**NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19**

Date	7/1/2025	Landowner/Project	WFM AMZ
Weather Station	O'Hare International Airport, IL	State	IL
County	Cook	Growing Season	Yes
Photo/obs Date	1999	Soil Name	N/A

shaded cells are locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	May	2.20	4.12	4.46	W	3	3	9
2nd Prior Month*	April	2.70	4.42	7.51	W	3	2	6
3rd Prior Month*	March	1.77	3.16	1.73	D	1	1	1
Sum								16

*compared to photo/observation date

Note: If sum is
6 - 9 prior period has been drier than normal
10 - 14 prior period has been normal
15 - 18 prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: prior period has been wetter than normal

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	7/1/2025	Landowner/Project	WFM AMZ
Weather Station	O'Hare International Airport, IL	State	IL
County	Cook	Growing Season	Yes
Photo/obs Date	2000	Soil Name	N/A

shaded cells are locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	May	2.20	4.12	4.02	N	2	3	6
2nd Prior Month*	April	2.70	4.42	5.15	W	3	2	6
3rd Prior Month*	March	1.77	3.16	1.18	D	1	1	1
Sum								13

*compared to photo/observation date

Note: If sum is

6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: prior period has been normal

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	7/1/2025	Landowner/Project	WFM AMZ
Weather Station	O'Hare International Airport, IL	State	IL
County	Cook	Growing Season	Yes
Photo/obs Date	2001	Soil Name	N/A

shaded cells are locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	May	2.20	4.12	3.34	N	2	3	6
2nd Prior Month*	April	2.70	4.42	2.82	N	2	2	4
3rd Prior Month*	March	1.77	3.16	1.3	D	1	1	1
Sum								11

*compared to photo/observation date

Note: If sum is

6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: prior period has been normal

**NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
Engineering Field Handbook Chapter 19**

NRCS

Date	7/1/2025	Landowner/Project	WFM AMZ
Weather Station	O'Hare International Airport, IL	State	IL
County	Cook	Growing Season	Yes
Photo/obs Date	2025	Soil Name	N/A

shaded cells are locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	April	1.01	2	2.66	W	3	3	9
2nd Prior Month*	March	1.77	3.16	2.99	N	2	2	4
3rd Prior Month*	February	2.7	4.42	0.52	D	1	1	1

*compared to photo/observation date

Sum **14**

Note: If sum is	
6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: prior period has been normal

Site Name:	159th & LaGrange Retail	Date:	6/26/2025			
Location:	Lat 41.60038, Long -87.85517	Prepared by:	Sarah Skowronski, PWS			
Wetland Signature Assessment³						
Imagery Date	Source¹	Annual Precipitation Condition²	1			
6/1/1991	FSA Compliance Slides	Normal	SS/NC			
6/1/1993	FSA Compliance Slides	Wetter than normal, secondary	SS/NC			
6/1/1994	FSA Compliance Slides	Normal	SS			
6/1/1996	FSA Compliance Slides	Wetter than normal, primary	SS/CS			
6/1/1998	FSA Compliance Slides	Normal	SS/NC			
6/1/1999	FSA Compliance Slides	Wetter than normal, secondary	SS			
6/1/2000	FSA Compliance Slides	Normal	NC			
6/1/2001	FSA Compliance Slides	Normal	SS/NC			
Number of Normal Years: 5			5			
ID on NWI (Y/N) ⁴			Y			
Potential FW			Y			
Field-Verified Hydric Soil ⁵ (Y/N)			Y			
Qualifies as FW?⁶			Y			

1 i.e., FSA imagery or Google Earth imagery; attach color copies with annual wetland signature marked and labeled consistent with that year's wetland signature assessment.

2 i.e., Wet Year or Normal Year

3 The number of signatures is typically based on the two wet years; however, additional signatures may occur upon review of normal year aerial source data. Expand table as needed.

4 Designation of an area as a wetland/farmed wetland on the NWI map or the LCWI map constitutes one (1) year of wetland signature.

5 Attach copies of field data point forms and Antecedent Precipitation Tool graph/table for field investigation sampling date.

6 The averaged size for each qualifying signature should be plotted on a recent aerial image (scale: 1"=400' or larger) for the Agricultural Land Wetland Determination exhibit

SS= Soil Saturation

NC=Not Cropped

CS= Crop Stress

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park , Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-01
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None
 Slope (%): 0 Lat: 41.6005783 Long: -87.85462129 Datum: WGS 84
 Soil Map Unit Name: 232A - Ashkum silty clay loam, 0 to 2 percent slopes NWI classification: N/A

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

Remarks:
 Site has been previously graded. Gravel fill present at 12 inches, sample point taken in active ag field.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>1</u> x 5 = <u>5</u> Column Totals: <u>1</u> (A) <u>5</u> (B) Prevalence Index = B/A = <u>5.00</u>
Sapling/Shrub Stratum	(Plot size: <u>15 ft r</u>)				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		=Total Cover			
Herb Stratum	(Plot size: <u>5 ft r</u>)				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.
1.	<u>Glycine max</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
		<u>1</u> =Total Cover			
Woody Vine Stratum	(Plot size: <u>30 ft r</u>)				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
		=Total Cover			

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

SOIL

Sampling Point: SP-01

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 - 4	10YR 2/1	100					Loam	
4 - 12	10YR 2/1	30					Clay	
4 - 12	10YR 5/2	40					Clay	
4 - 12	10YR 5/6	30					Clay	
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Iron Monosulfide (A18)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Iron-Manganese Masses (F12)
- Red Parent Material (F21) Very
- Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Gravel fill present throughout second layer.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Remarks:

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-01

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata:
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			_____ =Total Cover	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			_____ =Total Cover	
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
			1 _____ =Total Cover	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			_____ =Total Cover	

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-02
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Backslope Local relief (concave, convex, none): Concave
 Slope (%): 1 Lat: 41.60103095 Long: -87.85519414 Datum: WGS 84
 Soil Map Unit Name: 232A - Ashkum silty clay loam, 0 to 2 percent slopes NWI classification: N/A

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="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks:
 SP taken due to encountering saturated conditions in an area left non-cropped. No geomorphic position and significantly disturbed soils in combination with it being an active ag field. Gravel fill throughout second layer.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
=Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>3</u> x 2 = <u>6</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>41</u> x 4 = <u>164</u> UPL species <u>30</u> x 5 = <u>150</u> Column Totals: <u>74</u> (A) <u>320</u> (B) Prevalence Index = B/A = <u>4.32</u>
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Pyrus calleryana</u>	<u>3</u>	_____	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
=Total Cover				
Herb Stratum (Plot size: <u>5 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Dipsacus fullonum</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Lolium perenne ssp. perenne</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	
3. <u>Solidago canadensis</u>	<u>8</u>	_____	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
=Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Vitis riparia</u>	<u>3</u>	_____	<u>FACW</u>	
2. _____	_____	_____	_____	
=Total Cover				

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

SOIL

Sampling Point: SP-02

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 - 7	10YR 3/1	100						
7 - 14	10YR 5/3	70	10YR 5/6	10	C	M		
7 - 14	10YR 5/2	20						
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Red Parent Material (F21) Very
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Shallow Dark Surface (F22)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Other (Explain in Remarks)
<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"/> Iron Monosulfide (A18)	
<input type="checkbox"/> Sandy Mucky 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"/> Dark Surface (S7)	
<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)	

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

Restrictive Layer (if observed): Type: <u>Gravel fill</u> Depth (inches): <u>14</u>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<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="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

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

Remarks:

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-02

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			<u>3</u> =Total Cover	
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
			<u>68</u> =Total Cover	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			<u>3</u> =Total Cover	

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-03
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0 Lat: 41.6010188 Long: -87.85523963 Datum: WGS 84
 Soil Map Unit Name: 232A - Ashkum silty clay loam, 0 to 2 percent slopes NWI classification: N/A

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

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

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

Remarks:
 Site had been regraded in the past. Gravel fill present at 14 inches. SP taken in depression that leads to a ditch line outside of study area running parallel to northern boundary of the site.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		=Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15 ft r</u>)				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>3</u> x 1 = <u>3</u> FACW species <u>80</u> x 2 = <u>160</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>5</u> x 4 = <u>20</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>88</u> (A) <u>183</u> (B) Prevalence Index = B/A = <u>2.07</u>
1.	_____				
2.	_____				
3.	_____				
4.	_____				
5.	_____				
		=Total Cover			
Herb Stratum	(Plot size: <u>5 ft r</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 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.
1.	<u>Phragmites australis</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2.	<u>Phalaris arundinacea</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3.	<u>Dipsacus fullonum</u>	<u>5</u>		<u>FACU</u>	
4.	<u>Lythrum salicaria</u>	<u>3</u>		<u>OBL</u>	
5.	_____				
6.	_____				
7.	_____				
8.	_____				
9.	_____				
10.	_____				
		<u>88</u>	=Total Cover		
Woody Vine Stratum	(Plot size: <u>30 ft r</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1.	_____				
2.	_____				
		=Total Cover			

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

SOIL

Sampling Point: SP-03

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 - 9	10YR 4/1	100	10YR 6/8	3	C	M	Clay Loam	
9 - 14	10YR 5/1	70	10YR 5/8	10	C	M	Clay Loam	
9 - 14			10YR 6/8	20	C	M	Clay Loam	
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Iron Monosulfide (A18)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Iron-Manganese Masses (F12)
- Red Parent Material (F21) Very
- Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Gravel fill
 Depth (inches): 14

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Remarks:

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-03

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
			<u>88</u> =Total Cover	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			=Total Cover	

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-04
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Backslope Local relief (concave, convex, none): Concave
 Slope (%): 8 Lat: 41.60070434 Long: -87.85609873 Datum: WGS 84
 Soil Map Unit Name: 232A - Ashkum silty clay loam, 0 to 2 percent slopes NWI classification: N/A

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 _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Sample point taken on backslope in northern portion of the study area in a grassland area. Gravel fill was found at 9in.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		=Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15 ft r</u>)				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		=Total Cover			
Herb Stratum	(Plot size: <u>5 ft r</u>)				
1.	<u>Solidago canadensis</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2.	<u>Coronilla varia</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	
3.	<u>Dipsacus fullonum</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
		=Total Cover			
Woody Vine Stratum	(Plot size: <u>30 ft r</u>)				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
		=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: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (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 80 x 4 = 320
 UPL species 20 x 5 = 100
 Column Totals: 100 (A) 420 (B)
 Prevalence Index = B/A = 4.20

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

Hydrophytic Vegetation Present? Yes _____ No

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

SOIL

Sampling Point: SP-04

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 - 9	10YR 4/2	100					Sandy Loam	
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Iron Monosulfide (A18)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Iron-Manganese Masses (F12)
- Red Parent Material (F21) Very
- Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Gravel
 Depth (inches): 9

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Remarks:

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-04

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
			<u>100</u> =Total Cover	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			=Total Cover	

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-05
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0 Lat: 41.60070434 Long: -87.85613193 Datum: WGS 84
 Soil Map Unit Name: 232A - Ashkum silty clay loam, 0 to 2 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Sample point taken downslope of SP-4 to the northwest in a grassland depression. Gravel fill was present at 9in.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Salix alba</u>	<u>3</u>		<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.66</u> (A/B)																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
	<u>3</u>	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)																				
1. <u>Cornus racemosa</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>73</u></td> <td>x 2 = <u>146</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>93</u> (A)</td> <td><u>226</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.43</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>73</u>	x 2 = <u>146</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>93</u> (A)	<u>226</u> (B)	Prevalence Index = B/A = <u>2.43</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>73</u>	x 2 = <u>146</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>10</u>	x 4 = <u>40</u>																			
UPL species <u>5</u>	x 5 = <u>25</u>																			
Column Totals: <u>93</u> (A)	<u>226</u> (B)																			
Prevalence Index = B/A = <u>2.43</u>																				
2. <u>Populus deltoides ssp. deltoides</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>UPL</u>																	
3. _____																				
4. _____																				
5. _____																				
	<u>10</u>	=Total Cover																		
Herb Stratum (Plot size: <u>5 ft r</u>)																				
1. <u>Phragmites australis</u>	<u>70</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 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.																
2. <u>Dipsacus fullonum</u>	<u>10</u>		<u>FACU</u>																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
	<u>80</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																				
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____																
2. _____																				
		=Total Cover																		

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

SOIL

Sampling Point: SP-05

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 - 9	10YR 3/1	95	10YR 5/6	5	C	M	Clay Loam	
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Iron Monosulfide (A18)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Iron-Manganese Masses (F12)
- Red Parent Material (F21) Very
- Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Gravel
 Depth (inches): 9

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Remarks:

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-05

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
	<u>3</u> =Total Cover			
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
	<u>10</u> =Total Cover			
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
	<u>80</u> =Total Cover			
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	_____ =Total Cover			

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-06
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0 Lat: 41.60064954 Long: -87.85726611 Datum: WGS 84
 Soil Map Unit Name: 298B - Beecher silt loam, 2 to 4 percent slopes NWI classification: N/A

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

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

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

Remarks:

Sample Point Taken in scrub/shrub depression in northwest corner of the study area.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>85.71</u> (A/B)
1. <u>Populus deltoides ssp. deltoides</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
			<u>60</u> =Total Cover	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>55</u> x 2 = <u>110</u> FAC species <u>130</u> x 3 = <u>390</u> FACU species <u>15</u> x 4 = <u>60</u> UPL species <u>4</u> x 5 = <u>20</u> Column Totals: <u>204</u> (A) <u>580</u> (B) Prevalence Index = B/A = <u>2.84</u>
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Sambucus nigra ssp. canadensis</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Cornus racemosa</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. <u>Populus deltoides ssp. deltoides</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
4. <u>Rhamnus cathartica</u>	<u>5</u>	_____	<u>FAC</u>	
5. _____	_____	_____	_____	
			<u>70</u> =Total Cover	
Herb Stratum (Plot size: <u>5 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 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.
1. <u>Phragmites australis</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Dipsacus fullonum</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Cirsium altissimum</u>	<u>2</u>	_____	<u>UPL</u>	
4. <u>Phryma leptostachya</u>	<u>2</u>	_____	<u>UPL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
			<u>69</u> =Total Cover	
Woody Vine Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. <u>Vitis riparia</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. _____	_____	_____	_____	
			<u>5</u> =Total Cover	

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

SOIL

Sampling Point: SP-06

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 - 34	10YR 2/1	100						
34 - 38	10YR 4/1	92	10YR 5/8	8	C	M	Clay	
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Iron Monosulfide (A18)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Iron-Manganese Masses (F12)
- Red Parent Material (F21) Very
- Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Remarks:

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-06

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			<u>60</u> =Total Cover	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			<u>70</u> =Total Cover	
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
			<u>69</u> =Total Cover	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			<u>5</u> =Total Cover	

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-07
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Backslope Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 41.60054929 Long: -87.85727939 Datum: WGS 84
 Soil Map Unit Name: 298B - Beecher silt loam, 2 to 4 percent slopes NWI classification: N/A

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

Remarks:
 Sample point taken in scrub/shrub area on the backslope of the active agricultural field located in the northwestern section of the study area.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.00</u> (A/B)	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
=Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>40</u> x 4 = <u>160</u> UPL species <u>5</u> x 5 = <u>25</u> Column Totals: <u>75</u> (A) <u>245</u> (B) Prevalence Index = B/A = <u>3.26</u>	
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
=Total Cover					
Herb Stratum (Plot size: <u>5 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	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.	
1. <u>Phalaris arundinacea</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>		
2. <u>Solidago canadensis</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
3. <u>Dipsacus fullonum</u>	<u>10</u>		<u>FACU</u>		
4. <u>Daucus carota</u>	<u>5</u>		<u>UPL</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
<u>75</u> =Total Cover					
Woody Vine Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____	=Total Cover	

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

SOIL

Sampling Point: SP-07

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 - 19	10YR 2/1	100					Loam	
24 - 29	10YR 4/1	96	10YR 4/6	4	C	M	Clay	
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Red Parent Material (F21) Very
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Shallow Dark Surface (F22)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Stratified Layers (A5)	
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Iron Monosulfide (A18)	
<input type="checkbox"/> Sandy Mucky 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"/> Dark Surface (S7)	
<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)	

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

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

Remarks:
Gravel started at 29in.

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<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 <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
---	---

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

Remarks:

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-07

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
			<u>75</u> =Total Cover	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			=Total Cover	

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-08
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave
 Slope (%): 1 Lat: 41.59794178 Long: -87.85652311 Datum: WGS 84
 Soil Map Unit Name: 530D2 - Ozaukee silt loam, 6 to 12 percent slopes, eroded NWI classification: N/A

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

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

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

Remarks:

Sample point taken in grassy area located in southern portion of the study area.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75.00</u> (A/B)
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		=Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15 ft r</u>)				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>40</u> x 1 = <u>40</u> FACW species <u>55</u> x 2 = <u>110</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>105</u> (A) <u>190</u> (B) Prevalence Index = B/A = <u>1.80</u>
1.	<u>Salix alba</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2.	<u>Hamamelis virginiana</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		<u>15</u>	=Total Cover		
Herb Stratum	(Plot size: <u>5 ft r</u>)				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 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.
1.	<u>Carex muskingumensis</u>	<u>35</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
2.	<u>Juncus dudleyi</u>	<u>35</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3.	<u>Phragmites australis</u>	<u>10</u>		<u>FACW</u>	
4.	<u>Dipsacus fullonum</u>	<u>5</u>		<u>FACU</u>	
5.	<u>Typha angustifolia</u>	<u>5</u>		<u>OBL</u>	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
		<u>90</u>	=Total Cover		
Woody Vine Stratum	(Plot size: <u>30 ft r</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
		_____	=Total Cover		

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

SOIL

Sampling Point: SP-08

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 - 8	10YR 4/1	100					Clay Loam	
8 - 16	10YR 5/1	70	10YR 6/6	30	C	M	Clay Loam	
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Iron Monosulfide (A18)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Iron-Manganese Masses (F12)
- Red Parent Material (F21) Very
- Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 18
 Saturation Present? Yes No Depth (inches): 10
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-08

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			<u>15</u> =Total Cover	
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
			<u>90</u> =Total Cover	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			=Total Cover	

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-09
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None
 Slope (%): 0 Lat: 41.5979167 Long: -87.8564435 Datum: WGS 84
 Soil Map Unit Name: 530D2 - Ozaukee silt loam, 6 to 12 percent slopes, eroded NWI classification: N/A

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

Remarks:
Sample point taken in active agricultural field.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
=Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>1</u> x 5 = <u>5</u> Column Totals: <u>1</u> (A) <u>5</u> (B) Prevalence Index = B/A = <u>5.00</u>
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
=Total Cover				
Herb Stratum (Plot size: <u>5 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	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.
1. <u>Glycine max</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
=Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
=Total Cover				

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

SOIL

Sampling Point: SP-09

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 - 8	10YR 2/1	100					Clay Loam	
8 - 17	10YR 5/1	60					Clay Loam	
8 - 17	10YR 5/8	40					Clay Loam	
17 - 24	10YR 5/1	70	10YR 7/6	30	C	M	Clay	
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Iron Monosulfide (A18)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Iron-Manganese Masses (F12)
- Red Parent Material (F21) Very
- Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Remarks:

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-09

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata:
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
	_____	=Total Cover		
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
	_____	=Total Cover		
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
	1	=Total Cover		
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	_____	=Total Cover		

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-10
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None
 Slope (%): 0 Lat: 41.59845448 Long: -87.85578559 Datum: WGS 84
 Soil Map Unit Name: 232A - Ashkum silty clay loam, 0 to 2 percent slopes NWI classification: N/A

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

Remarks:

Sample point taken in an active agricultural field.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		=Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15 ft r</u>)				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>1</u> x 5 = <u>5</u> Column Totals: <u>1</u> (A) <u>5</u> (B) Prevalence Index = B/A = <u>5.00</u>
1.	_____				
2.	_____				
3.	_____				
4.	_____				
5.	_____				
		=Total Cover			
Herb Stratum	(Plot size: <u>5 ft r</u>)				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.
1.	<u>Glycine max</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	
2.	_____				
3.	_____				
4.	_____				
5.	_____				
6.	_____				
7.	_____				
8.	_____				
9.	_____				
10.	_____				
		<u>1</u> =Total Cover			
Woody Vine Stratum	(Plot size: <u>30 ft r</u>)				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
1.	_____				
2.	_____				
		=Total Cover			

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

SOIL

Sampling Point: SP-10

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 - 20	10YR 2/1	100					Clay Loam	
25 - 32	10YR 5/1	90	10YR 5/6	6	C	M	Clay	
25 - 32			10YR 3/1	4	D	M	Clay	
25 - 32							Clay	
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Iron Monosulfide (A18)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Iron-Manganese Masses (F12)
- Red Parent Material (F21) Very
- Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Remarks:

Gently sloping north so no geomorph

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-10

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
			1 =Total Cover	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			=Total Cover	

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-11
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Backslope Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 41.59789158 Long: -87.85338866 Datum: WGS 84
 Soil Map Unit Name: 235A - Bryce silty clay, 0 to 2 percent slopes NWI classification: N/A

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 _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Sample point taken on the edge of an active agricultural field.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		=Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15 ft r</u>)				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		=Total Cover			
Herb Stratum	(Plot size: <u>5 ft r</u>)				
1.	<u>Phalaris arundinacea</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2.	<u>Glycine max</u>	<u>1</u>		<u>UPL</u>	
3.	_____	_____			
4.	_____	_____			
5.	_____	_____			
6.	_____	_____			
7.	_____	_____			
8.	_____	_____			
9.	_____	_____			
10.	_____	_____			
		<u>6</u> =Total Cover			
Woody Vine Stratum	(Plot size: <u>30 ft r</u>)				
1.	_____	_____			
2.	_____	_____			
		=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: 100.00 (A/B)

Prevalence Index worksheet:
 Total % Cover of: Multiply by:
 OBL species 0 x 1 = 0
 FACW species 5 x 2 = 10
 FAC species 0 x 3 = 0
 FACU species 0 x 4 = 0
 UPL species 1 x 5 = 5
 Column Totals: 6 (A) 15 (B)
 Prevalence Index = B/A = 2.50

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

Hydrophytic Vegetation Present? Yes _____ No

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

SOIL

Sampling Point: SP-11

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 - 9	10YR 2/1	100					Clay Loam	
9 - 14	10YR 4/1	95	10YR 6/6	5	C	M	Clay Loam	
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Iron Monosulfide (A18)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Iron-Manganese Masses (F12)
- Red Parent Material (F21) Very
- Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Remarks:

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-11

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
			=Total Cover	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			=Total Cover	

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-12
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): Concave
 Slope (%): 0 Lat: 41.59787037 Long: -87.85329891 Datum: WGS 84
 Soil Map Unit Name: 235A - Bryce silty clay, 0 to 2 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Sample point taken on edge of an active agricultural field and grassland area in the southwestern corner of the study area.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
=Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>15 ft r</u>)				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
=Total Cover					
Herb Stratum	(Plot size: <u>5 ft r</u>)				
1.	<u>Phragmites australis</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2.	<u>Dipsacus fullonum</u>	<u>10</u>		<u>FACU</u>	
3.	<u>Typha angustifolia</u>	<u>10</u>		<u>OBL</u>	
4.	_____	_____			
5.	_____	_____			
6.	_____	_____			
7.	_____	_____			
8.	_____	_____			
9.	_____	_____			
10.	_____	_____			
=Total Cover					
Woody Vine Stratum	(Plot size: <u>30 ft r</u>)				
1.	_____	_____			
2.	_____	_____			
=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: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>10</u>	x 1 = <u>10</u>
FACW species <u>60</u>	x 2 = <u>120</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>80</u> (A)	<u>170</u> (B)
Prevalence Index = B/A = <u>2.12</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

_____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes No _____

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

SOIL

Sampling Point: SP-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 18	10YR 2/1	100					Clay Loam	
18 - 24	10YR 4/1	95	10YR 5/6	5	C	M		
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Iron Monosulfide (A18)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Iron-Manganese Masses (F12)
- Red Parent Material (F21) Very
- Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Remarks:

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-12

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
			<u>80</u> =Total Cover	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			=Total Cover	

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-13
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Ditch Local relief (concave, convex, none): Concave
 Slope (%): 0 Lat: 41.59898175 Long: -87.85310495 Datum: WGS 84
 Soil Map Unit Name: 298B - Beecher silt loam, 2 to 4 percent slopes NWI classification: N/A

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

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

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

Remarks:

Sample point taken in grassland area in the western portion of the study area.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		=Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15 ft r</u>)				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>15</u> x 4 = <u>60</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>115</u> (A) <u>260</u> (B) Prevalence Index = B/A = <u>2.26</u>
1.	_____				
2.	_____				
3.	_____				
4.	_____				
5.	_____				
		=Total Cover			
Herb Stratum	(Plot size: <u>5 ft r</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 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.
1.	<u>Phragmites australis</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2.	<u>Phalaris arundinacea</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3.	<u>Dipsacus fullonum</u>	<u>15</u>		<u>FACU</u>	
4.	_____				
5.	_____				
6.	_____				
7.	_____				
8.	_____				
9.	_____				
10.	_____				
		<u>115</u>	=Total Cover		
Woody Vine Stratum	(Plot size: <u>30 ft r</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1.	_____				
2.	_____				
		=Total Cover			

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

SOIL

Sampling Point: SP-13

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 - 14	10YR 2/1	94	10YR 5/8	6	C	M	Clay Loam	
14 - 18	10YR 3/1	60					Sandy Loam	
14 - 18	10YR 4/6	40					Sandy Loam	
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Iron Monosulfide (A18)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Iron-Manganese Masses (F12)
- Red Parent Material (F21) Very
- Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Gravel fill
 Depth (inches): 18

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Remarks:

VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-13

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
			<u>115</u> =Total Cover	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			=Total Cover	

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

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

OMB Control #: 0710-0024, Exp: 09/30/2027
 Requirement Control Symbol EXEMPT:
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: 159th & LaGrange Retail City/County: Orland Park, Cook County Sampling Date: 2025-05-28
 Applicant/Owner: _____ State: Illinois Sampling Point: SP-14
 Investigator(s): Sarah Skowronski Section, Township, Range: S21 T36N R12E
 Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None
 Slope (%): 0 Lat: 41.59897533 Long: -87.85302689 Datum: WGS 84
 Soil Map Unit Name: 298B - Beecher silt loam, 2 to 4 percent slopes NWI classification: N/A

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

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

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

Remarks:
Sample point taken next to roadway in a grassland area in the western portion of the study area.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>100</u> x 3 = <u>300</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>300</u> (B) Prevalence Index = B/A = <u>3.00</u>
Sapling/Shrub Stratum	(Plot size: <u>15 ft r</u>)				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		=Total Cover			
Herb Stratum	(Plot size: <u>5 ft r</u>)				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 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.
1.	<u>Poa pratensis</u>	<u>100</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
		<u>100</u>	=Total Cover		
Woody Vine Stratum	(Plot size: <u>30 ft r</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
		=Total Cover			

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

SOIL

Sampling Point: SP-14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 18	10YR 4/4	100					Silty Clay	
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Iron Monosulfide (A18)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Iron-Manganese Masses (F12)
- Red Parent Material (F21) Very
- Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Remarks:

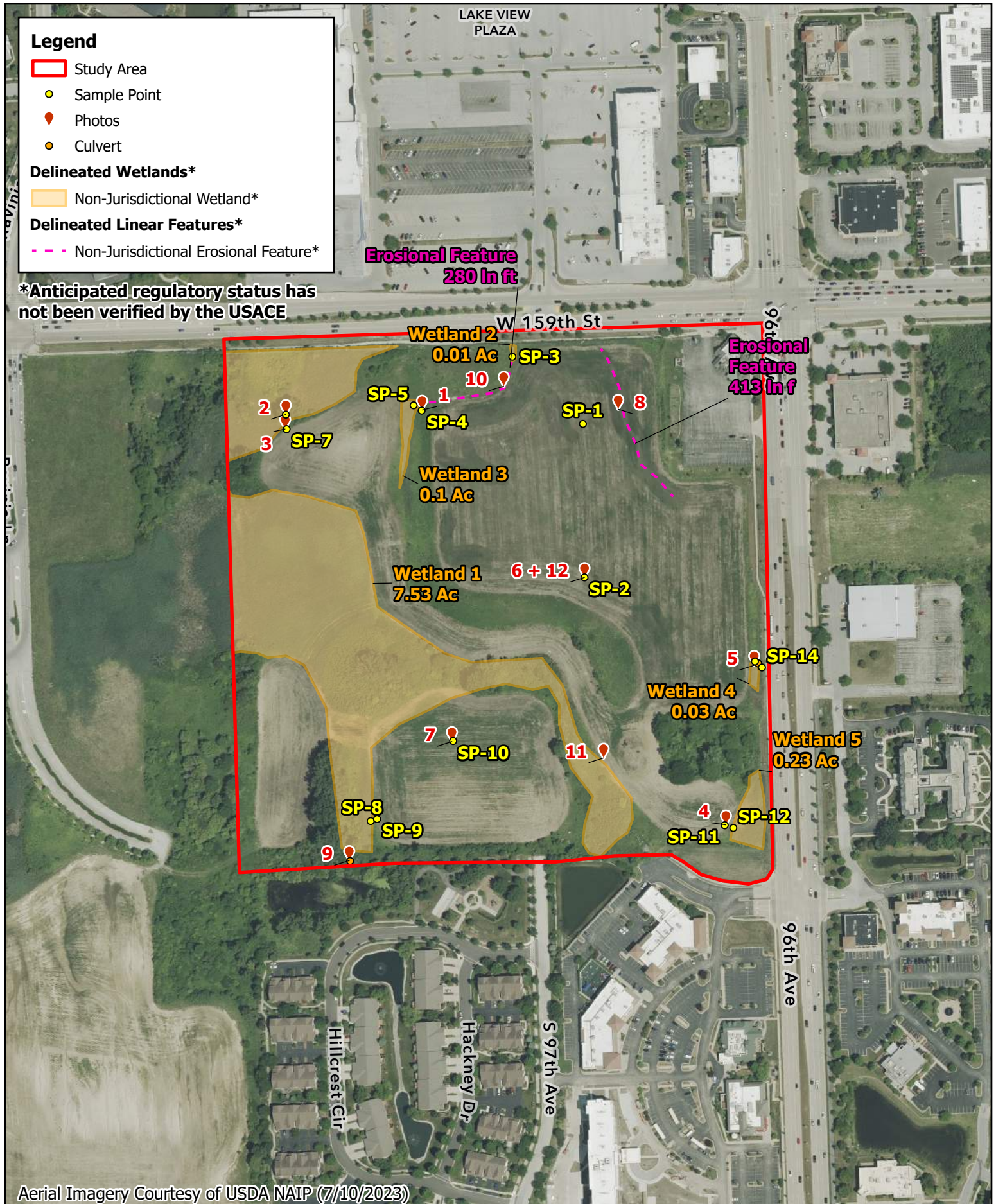
VEGETATION Continued – Use scientific names of plants.

Sampling Point: SP-14

<u>Tree Stratum</u>	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
			=Total Cover	
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
			<u>100</u> =Total Cover	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			=Total Cover	

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

Appendix E: Photos



Legend

- Study Area
- Sample Point
- Photos
- Culvert

Delineated Wetlands*

- Non-Jurisdictional Wetland*

Delineated Linear Features*

- Non-Jurisdictional Erosional Feature*

*Anticipated regulatory status has not been verified by the USACE

Aerial Imagery Courtesy of USDA NAIP (7/10/2023)



Photo 1: SP-4, facing West, view of Wetland 3



Photo 2: SP-6, facing South



Photo 3: SP-7, facing south



Photo 4: SP-11, facing east, view of wetland 5



Photo 5: From SP-13, view of culvert and Wetland 4



Photo 6: View of Agricultural Field



Photo 7: From SP-10, looking at finger of Wetland 1



Photo 8: View of soil rill, west of parking lot in northeast portion of study area.



Photo 9: View of Southern Culvert



Photo 10: View of Wetland 2 facing north, rill is shown along upland edge



Photo 11: View of Wetland 1 and upland crop field



Photo 12: View of wetland 2 from south end of Study Area, Facing north

Appendix F: Floristic Quality Index

Orland Park

5/28/2025

Lvl 2 Orland Park

Orland Park

Cook

IL

United States

FQA DB Region:

Chicago Region USACE

FQA DB Publication Year:

2017

FQA DB Description:

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

Practitioner:

Ian Van Wazer

Latitude:

41.59794178

Longitude:

-87.85652311

Weather Notes:

Duration Notes:

Community Type Notes:

Other Notes:

Wetland 1

Private/Public:

Private

Conservatism-Based Metrics:

Total Mean C:

1.8

Native Mean C:

2.8

Total FQI:

9.9

Native FQI:

12.5

Adjusted FQI:

22.9

% C value 0:

50

% C value 1-3:

30

% C value 4-6:

6.7

% C value 7-10:

13.3

Native Tree Mean C:

0.5

Native Shrub Mean C:

4.6

Native Herbaceous Mean C:

2.4

Species Richness:

Total Species:

30

Native Species:

20

66.70%

Non-native Species:

10

33.30%

Species Wetness:

Mean Wetness:

0

Native Mean Wetness:

-0.1

Physiognomy Metrics:

Tree:

3

10%

Shrub:

7

23.30%

Vine:

2

6.70%

Forb:

14

46.70%

Grass:

3

10%

Sedge:

1

3.30%

Rush:

0

0%

Fern:

0

0%

Bryophyte:

0

0%

Duration Metrics:

Annual:

2

6.70%

Perennial:

25

83.30%

Biennial:

3

10%

Native Annual:

2

6.70%

Native Perennial:

17

56.70%

Native Biennial:

1

3.30%

Species:

Scientific Name

Family

Acronym

Native?

C

W

Physiognor Duration

Common Name

Ambrosia artemisiifolia

Asteraceae

AMBART

native

0

1 forb annual

annual ragweed

Asclepias speciosa

Asclepiadaceae

ASCSP

non-native

0

0 forb perennial

showy milkweed

Carex vulpinoidea

Cyperaceae

CXVULP

native

2

-1 sedge perennial

common fox sedge

Cirsium arvense

Asteraceae

CIRARV

non-native

0

1 forb perennial

canadian thistle

Cornus racemosa

Cornaceae

CORRAC

native

1

0 shrub perennial

gray dogwood

Daucus carota	Apiaceae	DAUCAR	non-native	0	2 forb	biennial	queen annes lace
Dipsacus fullonum	Dipsacaceae	DIPFUL	non-native	0	1 forb	biennial	fullers teasel
Erigeron canadensis	Asteraceae	ERICAN	native	0	1 forb	annual	canadian horseweed
Geum laciniatum	Rosaceae	GEULAC	native	3	-1 forb	perennial	rough avens
Gleditsia triacanthos	Fabaceae	GLETRI	native	1	1 tree	perennial	honey-locust
Hamamelis virginiana	Hamamelidaceae	HAMVIR	native	8	1 shrub	perennial	american witch-hazel
Heliopsis helianthoides	Asteraceae	HELHEL	native	7	1 forb	perennial	smooth oxeye
Hordeum jubatum	Poaceae	HORJUB	native	0	0 grass	perennial	fox-tail barley
Juncus dudleyi	Juncaceae	JUNDUD	native	2	-1 forb	perennial	dudleys rush
Lythrum salicaria	Lythraceae	LYTSAL	non-native	0	-2 forb	perennial	purple loosestrife
Oenothera biennis	Onagraceae	OENBIE	native	0	1 forb	biennial	kings-cureall
Packera aurea	Asteraceae	PACAUAR	native	8	-1 forb	perennial	golden groundsel
Parthenocissus quinquefolia	Vitaceae	PARQUI	native	4	1 vine	perennial	virginia-creeper
Phalaris arundinacea	Poaceae	PHAARU	non-native	0	-1 grass	perennial	reed canary grass
Phragmites australis ssp. americanus	Poaceae	PHRAUSM	native	3	-1 grass	perennial	common reed
Populus deltoides	Salicaceae	POPDEL	native	0	0 tree	perennial	eastern cottonwood
Pyrus calleryana	Rosaceae	PYRCAL	non-native	0	2 tree	perennial	ornamental pear
Reynoutria japonica	Polygonaceae	POLCUS	non-native	0	1 shrub	perennial	japanese-knotweed
Rhamnus cathartica	Rhamnaceae	RHACAT	non-native	0	0 shrub	perennial	european buckthorn
Rosa palustris	Rosaceae	ROSPAL	native	8	-2 shrub	perennial	swamp rose
Salix interior	Salicaceae	SALINT	native	2	-1 shrub	perennial	sandbar willow
Sambucus nigra ssp. canadensis	Caprifoliaceae	SAMCAN	native	4	-1 shrub	perennial	black elder
Solidago canadensis	Asteraceae	SOLCAN	native	1	1 forb	perennial	canadian goldenrod
Typha angustifolia	Typhaceae	TYPANG	non-native	0	-2 forb	perennial	narrow-leaf cat-tail
Vitis riparia	Vitaceae	VITRIP	native	1	-1 vine	perennial	river-bank grape

Orland Park

5/28/2025

Lvl 2 Orland Park

Orland Park

Cook

IL

United States

FQA DB Region: Chicago Region USACE

FQA DB Publication Year: 2017

FQA DB Description: <https://www.lrc.usace.army.mil/Missions/Regulatory/FQA.aspx>

Practitioner: Ian Van Wazer

Latitude: 41.60103095

Longitude: -87.5519414

Weather Notes:

Duration Notes:

Community Type Notes:

Other Notes: SP-2/SP-3 (Wetland 2)

Private/Public: Private

Conservatism-Based Metrics:

Total Mean C: 0.6

Native Mean C: 3

Total FQI: 1.3

Native FQI: 3

Adjusted FQI: 13.4

% C value 0: 80

% C value 1-3: 20

% C value 4-6: 0

% C value 7-10: 0

Native Tree Mean C: n/a

Native Shrub Mean C: n/a

Native Herbaceous Mean C: 3

Species Richness:

Total Species: 5

Native Species: 1 20%

Non-native Species: 4 80%

Species Wetness:

Mean Wetness: -0.6

Native Mean Wetness: -1

Physiognomy Metrics:

Tree:	0	0%
Shrub:	0	0%
Vine:	0	0%
Forb:	4	80%
Grass:	1	20%
Sedge:	0	0%
Rush:	0	0%
Fern:	0	0%
Bryophyte:	0	0%

Duration Metrics:

Annual:	0	0%
Perennial:	4	80%
Biennial:	1	20%
Native Annual:	0	0%
Native Perennial:	1	20%
Native Biennial:	0	0%

Species:

Scientific Name	Family	Acronym	Native?	C	W	Physiognon	Duration	Common Name
Daucus carota	Apiaceae	DAUCAR	non-native		0	2 forb	biennial	queen annes lace
Geum laciniatum	Rosaceae	GEULAC	native		3	-1 forb	perennial	rough avens
Lythrum salicaria	Lythraceae	LYTSAL	non-native		0	-2 forb	perennial	purple loosestrife
Phalaris arundinacea	Poaceae	PHAARU	non-native		0	-1 grass	perennial	reed canary grass
Solidago sempervirens	Asteraceae	SOLSEM	non-native		0	-1 forb	perennial	seaside goldenrod

Orland Park

5/28/2025

Lvl 2 Orland Park

Orland Park

Cook

IL

United States

FQA DB Region:

Chicago Region USACE

FQA DB Publication Year:

2017

FQA DB Description:

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

Practitioner:

Ian Van Wazer

Latitude:

41.60070434

Longitude:

-87.85609873

Weather Notes:

Duration Notes:

Community Type Notes:

Other Notes:

SP4/SP5 (Wetland 3)

Private/Public:

Private

Conservatism-Based Metrics:

Total Mean C:

0.7

Native Mean C:

1.3

Total FQI:

1.9

Native FQI:

2.6

Adjusted FQI:

9.8

% C value 0:

57.1

% C value 1-3:

42.9

% C value 4-6:

0

% C value 7-10:

0

Native Tree Mean C:

0

Native Shrub Mean C:

1

Native Herbaceous Mean C:

2

Species Richness:

Total Species:

7

Native Species:

4

57.10%

Non-native Species:

3

42.90%

Species Wetness:

Mean Wetness:

0.3

Native Mean Wetness:

0

Physiognomy Metrics:

Tree:

2

28.60%

Shrub:

1

14.30%

Vine:

0

0%

Forb:

3

42.90%

Grass:

1

14.30%

Sedge:

0

0%

Rush:

0

0%

Fern:

0

0%

Bryophyte:

0

0%

Duration Metrics:

Annual:

0

0%

Perennial:

6

85.70%

Biennial:

1

14.30%

Native Annual:

0

0%

Native Perennial:

4

57.10%

Native Biennial:

0

0%

Species:

Scientific Name

Family

Acronym

Native?

C

W

Physiognomy

Duration

Common Name

Cornus racemosa

Cornaceae

CORRAC

native

1

0 shrub

perennial

gray dogwood

Dipsacus fullonum

Dipsacaceae

DIPFUL

non-native

0

1 forb

biennial

fullers teasel

Phragmites australis ssp. *americanus*

Poaceae

PHRAUSM

native

3

-1 grass

perennial

common reed

Populus deltoides

Salicaceae

POPDEL

native

0

0 tree

perennial

eastern cottonwood

Salix alba

Salicaceae

SALALB

non-native

0

-1 tree

perennial

white willow

Securigera varia

Fabaceae

CORVAR

non-native

0

2 forb

perennial

crown vetch

Solidago canadensis

Asteraceae

SOLCAN

native

1

1 forb

perennial

canadian goldenrod

Orland Park
5/28/2025

Lvl 2 Orland Park
Orland Park
Cook
IL
United States
FQA DB Region: Chicago Region USACE
FQA DB Publication Year: 2017
FQA DB Description: <https://www.lrc.usace.army.mil/Missions/Regulatory/FQA.aspx>

Practitioner: Ian Van Wazer
Latitude: 41.59898175
Longitude: -87.85310495
Weather Notes:
Duration Notes:
Community Type Notes:
Other Notes: SP-13/SP-14 (Wetland 4)
Private/Public: Private

Conservatism-Based Metrics:
Total Mean C: 0.4
Native Mean C: 1
Total FQI: 1.3
Native FQI: 2
Adjusted FQI: 6
% C value 0: 90.9
% C value 1-3: 0
% C value 4-6: 9.1
% C value 7-10: 0
Native Tree Mean C: 0
Native Shrub Mean C: n/a
Native Herbaceous Mean C: 1.3

Species Richness:
Total Species: 11
Native Species: 4 36.40%
Non-native Species: 7 63.60%

Species Wetness:
Mean Wetness: 1
Native Mean Wetness: 0.5

Physiognomy Metrics:		
Tree:	2	18.20%
Shrub:	0	0%
Vine:	1	9.10%
Forb:	8	72.70%
Grass:	0	0%
Sedge:	0	0%
Rush:	0	0%
Fern:	0	0%
Bryophyte:	0	0%

Duration Metrics:		
Annual:	0	0%
Perennial:	9	81.80%
Biennial:	2	18.20%
Native Annual:	0	0%
Native Perennial:	3	27.30%
Native Biennial:	1	9.10%

Species:

Scientific Name	Family	Acronym	Native?	C	W	Physiognon	Duration	Common Name
Cirsium arvense	Asteraceae	CIRARV	non-native		0	1 forb	perennial	canadian thistle
Convolvulus arvensis	Convolvulaceae	CONARV	non-native		0	2 forb	perennial	field bindweed
Erigeron philadelphicus	Asteraceae	ERIPHI	native		4	-1 forb	perennial	philadelphia fleabane
Eupatorium altissimum	Asteraceae	EUPALT	native		0	2 forb	perennial	tall boneset
Leonurus cardiaca	Lamiaceae	LEOCAR	non-native		0	2 forb	perennial	motherwort
Melilotus officinalis	Fabaceae	MELLOF	non-native		0	1 forb	biennial	yellow sweet-clover
Oenothera biennis	Onagraceae	OENBIE	native		0	1 forb	biennial	kings-cureall
Populus deltoides	Salicaceae	POPDEL	native		0	0 tree	perennial	eastern cottonwood
Robinia pseudoacacia	Fabaceae	ROBPSE	non-native		0	1 tree	perennial	black locust
Securigera varia	Fabaceae	CORVAR	non-native		0	2 forb	perennial	crown vetch
Solanum dulcamara	Solanaceae	SOLDUL	non-native		0	0 vine	perennial	climbing nightshade

Orland Park
 5/28/2025
 Lvl 2 Orland Park
 Orland Park
 Cook
 IL
 United States
 FQA DB Region: Chicago Region USACE
 FQA DB Publication Year: 2017
 FQA DB Description: <https://www.lrc.usace.army.mil/Missions/Regulatory/FQA.aspx>

Practitioner: Ian Van Wazer
 Latitude: 41.5978037
 Longitude: -87.85329891
 Weather Notes:
 Duration Notes:
 Community Type Notes:
 Other Notes: Wetland 5
 Private/Public: Private

Conservatism-Based Metrics:
 Total Mean C: 0.8
 Native Mean C: 2
 Total FQI: 1.8
 Native FQI: 2.8
 Adjusted FQI: 12.6
 % C value 0: 80
 % C value 1-3: 0
 % C value 4-6: 20
 % C value 7-10: 0
 Native Tree Mean C: n/a
 Native Shrub Mean C: n/a
 Native Herbaceous Mean C: 2

Species Richness:
 Total Species: 5
 Native Species: 2 40%
 Non-native Species: 3 60%

Species Wetness:
 Mean Wetness: 1
 Native Mean Wetness: 0

Physiognomy Metrics:

Tree:	0	0%
Shrub:	0	0%
Vine:	0	0%
Forb:	5	100%
Grass:	0	0%
Sedge:	0	0%
Rush:	0	0%
Fern:	0	0%
Bryophyte:	0	0%

Duration Metrics:

Annual:	0	0%
Perennial:	4	80%
Biennial:	1	20%
Native Annual:	0	0%
Native Perennial:	1	20%
Native Biennial:	1	20%

Species:

Scientific Name	Family	Acronym	Native?	C	W	Physiognon	Duration	Common Name
Cirsium arvense	Asteraceae	CIRARV	non-native		0	1 forb	perennial	canadian thistle
Erigeron philadelphicus	Asteraceae	ERIPHI	native		4	-1 forb	perennial	philadelphia fleabane
Leonurus cardiaca	Lamiaceae	LEOCAR	non-native		0	2 forb	perennial	motherwort
Oenothera biennis	Onagraceae	OENBIE	native		0	1 forb	biennial	kings-cureall
Securigera varia	Fabaceae	CORVAR	non-native		0	2 forb	perennial	crown vetch

ATTACHMENT C
IDNR EcoCAT & USFWS IPaC Consultations



Illinois Department of Natural Resources

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

JB Pritzker, Governor

Natalie Phelps Finnie, Director

June 09, 2025

Alyssa DeQuattro
Brooks Stickler
6876 Marwick Lane, Suite 350
Orlando, FL 32827

RE: Orland Park Retail
Project Number(s): 2514004
County: Cook

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.

However, if tree clearing is necessary, the Department recommends removing trees between November 1st and March 31st to avoid impacts to bats and birds.

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.

Isabella Newingham
Division of Ecosystems and Environment
217-785-5500



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Chicago Ecological Service Field Office
1511 47th Ave
Moline, IL 61265-7022
Phone: (309) 757-5800

In Reply Refer To:

11/12/2025 13:50:47 UTC

Project Code: 2026-0014704

Project Name: 159th St & LaGrange Rd Retail

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing

determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will first need to be addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chicago Ecological Service Field Office

1511 47th Ave

Moline, IL 61265-7022

(309) 757-5800

PROJECT SUMMARY

Project Code: 2026-0014704

Project Name: 159th St & LaGrange Rd Retail

Project Type: Commercial Development

Project Description: Commercial development within the 39-acre defined study area.
Construction to commence in 2026.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.5993681,-87.8553668687928,14z>



Counties: Cook County, Illinois

ENDANGERED SPECIES ACT SPECIES

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Rufa Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane <i>Grus americana</i> Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non- Essential

REPTILES

NAME	STATUS
Eastern Massasauga (=rattlesnake) <i>Sistrurus catenatus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2202	Threatened

INSECTS

NAME	STATUS
Hine's Emerald Dragonfly <i>Somatochlora hineana</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7877	Endangered
Monarch Butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Western Regal Fritillary <i>Argynnis idalia occidentalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Eastern Prairie Fringed Orchid <i>Platanthera leucophaea</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/601	Threatened
Leafy Prairie-clover <i>Dalea foliosa</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5498	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Sarah Skowronski
Address: 570 Lake Cook Rd Suite 200
City: Deerfield
State: IL
Zip: 60015
Email: sarah.skowronski@kimley-horn.com
Phone: 2242144614

ATTACHMENT D
MWRD WMO Schedule W Forms
& Wetland Impact Exhibit

SCHEDULE W

WMO Permit Number: _____

WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

NAME OF PROJECT: 159th & LaGrange Retail

Complete all items, unless instructed to proceed to later section.

1. WETLAND IDENTIFICATION: Wetland 1 - PEM1AF - approx 11.41 ac total 7.53 ac on site

2. ONSITE WETLANDS (If multiple wetlands are located onsite, submit a separate Schedule W for each wetland)

A. Is a wetland or farmed wetland located on the property interest?

No → Proceed to Item 3 Yes → Delineate wetland per §603.3. Proceed to Item 2.B

B. Is the onsite wetland within the development area or within 100 feet of the development?

No → Proceed to Item 2.C Yes → Submit a copy of the US Army Corps of Engineers (Corps) Jurisdictional Determination letter. Proceed to Item 2.D

C. Is an indirect wetland impact proposed?

No → Proceed to Item 3 Yes → Submit a copy of the US Army Corps of Engineers (Corps) Jurisdictional Determination letter. Proceed to Item 2.D

D. Does the Corps regulate the onsite wetland?

No → Proceed to Item 2.F Yes → Proceed to Item 2.E

E. Will the Corps regulated wetland be impacted by the development?

No → Proceed to Item 5 Yes → Submit a copy of the Corps permit application. (Approved Corps permit required prior to issuance.) Proceed to Item 4

F. Will the isolated wetland or associated buffer be impacted by the development?

No → Proceed to Item 5 Yes → Proceed to Item 4

3. OFFSITE WETLANDS (If multiple wetlands are located offsite within 100 feet of the site, submit a separate Schedule W for each wetland)

A. Is there an offsite wetland located within 100 feet of the development site?

No → Proceed to Item 3.E Yes → Delineate wetland per §603.5 and follow §603.6. Proceed to Item 3.B

B. Can a Corps Jurisdictional Determination letter be obtained?

No → Consider high quality isolated wetland Proceed to Item 2.C Yes → Proceed to Item 2.C

C. Does the wetland buffer extend onto the development?

No → Proceed to Item 3.E Yes → Proceed to Item 3.D

D. Is the wetland or associated buffer impacted by the development?

No → Proceed to Item 3.E Yes → Proceed to Item 4

E. Is an indirect wetland impact proposed?

No → Proceed to Item 5 Yes → Proceed to Item 4

SCHEDULE W

WMO Permit Number: _____

WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

4. MITIGATION FOR WETLAND IMPACTS

- Standard Isolated
 High Quality Isolated
 Corps Jurisdictional

Prepare the wetland/buffer submittal and briefly describe the impacts and proposed mitigation, below. (If the wetland is a Corps regulated wetland, briefly describe the wetland impacts and mitigation proposed under the Corps permit.)

Permanent impacts proposed to entirety of Wetland 7, excluding a 50ft buffer along western edge of study area. Total impact area of 7.04 ac will be mitigated at a 1.5:1 ratio for a total of 10.56 ac.

5. STORMWATER DETENTION WITHIN THE WETLAND

A. Is stormwater detention proposed within the wetland?

- No → Proceed to Item 6
 Yes → Proceed to Item 5.B

B. Is the wetland regulated by the Corps and is a Corps permit required for the development?

- No → Proceed to Item 5.D
 Yes → Proceed to Item 5.C

C. Did the Corps approve placing detention in the wetland?

- No → Detention not allowed
 Yes → Submit a copy of the approved Corps permit
 Proceed to Item 6

D. Is the wetland considered a high quality isolated wetland?

- No → Hydrologic study required
 Yes → Detention not allowed

6. RIPARIAN ENVIRONMENTS

A. Is there a riparian environment located onsite?

- No → Proceed to Item 8
 Yes → Proceed to Items 6.B and 6.C

B. Indicate the conditions that apply:

- Jurisdictional Waters of the U.S. (50-ft buffer from OHWM)
 Jurisdictional or isolated waters with BSC of "A" or "B" or BSS Streams (100-ft buffer from OHWM)
 Isolated Waters (30-ft buffer from OHWM)

C. Is the riparian environment adversely impacted by the development?

- No → Proceed to Item 8
 Yes → Proceed to Item 7

7. MITIGATION FOR RIPARIAN IMPACTS

A. Prepare a riparian submittal and briefly describe the impacts and proposed mitigation: _____

8. WETLAND SPECIALIST CERTIFICATION

NOTE: If the answers to Items 2.D, 2.F, 3.E, 5.A or 6.C are yes, prepare the appropriate wetland, buffer and riparian environment submittals with supporting documentation along with the Watershed Management Permit application. (Electronic signatures are not accepted.)

Company/Agency: Kimley-Horn & Associates

Wetland Specialist: Sarah Skowronski

Title: Environmental Scientist

Signature: [Signature]

Date: 11/13/2025

SCHEDULE W

WMO Permit Number: _____

WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

NAME OF PROJECT: 159th & LaGrange Retail

Complete all items, unless instructed to proceed to later section.

1. WETLAND IDENTIFICATION: Wetland 2 - PSSIC - 0.01 acres

2. ONSITE WETLANDS (If multiple wetlands are located onsite, submit a separate Schedule W for each wetland)

A. Is a wetland or farmed wetland located on the property interest?

No → Proceed to Item 3 Yes → Delineate wetland per §603.3. Proceed to Item 2.B

B. Is the onsite wetland within the development area or within 100 feet of the development?

No → Proceed to Item 2.C Yes → Submit a copy of the US Army Corps of Engineers (Corps) Jurisdictional Determination letter. Proceed to Item 2.D

C. Is an indirect wetland impact proposed?

No → Proceed to Item 3 Yes → Submit a copy of the US Army Corps of Engineers (Corps) Jurisdictional Determination letter. Proceed to Item 2.D

D. Does the Corps regulate the onsite wetland?

No → Proceed to Item 2.F Yes → Proceed to Item 2.E

E. Will the Corps regulated wetland be impacted by the development?

No → Proceed to Item 5 Yes → Submit a copy of the Corps permit application. (Approved Corps permit required prior to issuance.) Proceed to Item 4

F. Will the isolated wetland or associated buffer be impacted by the development?

No → Proceed to Item 5 Yes → Proceed to Item 4

3. OFFSITE WETLANDS (If multiple wetlands are located offsite within 100 feet of the site, submit a separate Schedule W for each wetland)

A. Is there an offsite wetland located within 100 feet of the development site?

No → Proceed to Item 3.E Yes → Delineate wetland per §603.5 and follow §603.6. Proceed to Item 3.B

B. Can a Corps Jurisdictional Determination letter be obtained?

No → Consider high quality isolated wetland Proceed to Item 2.C Yes → Proceed to Item 2.C

C. Does the wetland buffer extend onto the development?

No → Proceed to Item 3.E Yes → Proceed to Item 3.D

D. Is the wetland or associated buffer impacted by the development?

No → Proceed to Item 3.E Yes → Proceed to Item 4

E. Is an indirect wetland impact proposed?

No → Proceed to Item 5 Yes → Proceed to Item 4

SCHEDULE W

WMO Permit Number: _____

WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

4. MITIGATION FOR WETLAND IMPACTS

- Standard Isolated High Quality Isolated Corps Jurisdictional

Prepare the wetland/buffer submittal and briefly describe the impacts and proposed mitigation, below. (If the wetland is a Corps regulated wetland, briefly describe the wetland impacts and mitigation proposed under the Corps permit.)

Wetland 2 will be permanently impacted in totality however it is exempt from mitigation due to being less than 0.1 acres per Section 404.9. A.

5. STORMWATER DETENTION WITHIN THE WETLAND

- A. Is stormwater detention proposed within the wetland?
 No → Proceed to Item 6 Yes → Proceed to Item 5.B
- B. Is the wetland regulated by the Corps and is a Corps permit required for the development?
 No → Proceed to Item 5.D Yes → Proceed to Item 5.C
- C. Did the Corps approve placing detention in the wetland?
 No → Detention not allowed Yes → Submit a copy of the approved Corps permit
Proceed to Item 6
- D. Is the wetland considered a high quality isolated wetland?
 No → Hydrologic study required Yes → Detention not allowed

6. RIPARIAN ENVIRONMENTS

- A. Is there a riparian environment located onsite?
 No → Proceed to Item 8 Yes → Proceed to Items 6.B and 6.C
- B. Indicate the conditions that apply:
 Jurisdictional Waters of the U.S. (50-ft buffer from OHWM)
 Jurisdictional or isolated waters with BSC of "A" or "B" or BSS Streams (100-ft buffer from OHWM)
 Isolated Waters (30-ft buffer from OHWM)
- C. Is the riparian environment adversely impacted by the development?
 No → Proceed to Item 8 Yes → Proceed to Item 7

7. MITIGATION FOR RIPARIAN IMPACTS

- A. Prepare a riparian submittal and briefly describe the impacts and proposed mitigation: _____

8. WETLAND SPECIALIST CERTIFICATION

NOTE: If the answers to Items 2.D, 2.F, 3.E, 5.A or 6.C are yes, prepare the appropriate wetland, buffer and riparian environment submittals with supporting documentation along with the Watershed Management Permit application. (Electronic signatures are not accepted.)

Company/Agency: Kimley-Horn & Associates, Inc.
Wetland Specialist: Janah Skowronski Title: Environmental Scientist
Signature: [Signature] Date: 11/13/2025

SCHEDULE W

WMO Permit Number: _____

WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

NAME OF PROJECT: 159th & LaGrange Retail

Complete all items, unless instructed to proceed to later section.

1. WETLAND IDENTIFICATION: Wetland 3 - PEM1AF - 0.1 acres

2. ONSITE WETLANDS (If multiple wetlands are located onsite, submit a separate Schedule W for each wetland)

A. Is a wetland or farmed wetland located on the property interest?

No → Proceed to Item 3 Yes → Delineate wetland per §603.3. Proceed to Item 2.B

B. Is the onsite wetland within the development area or within 100 feet of the development?

No → Proceed to Item 2.C Yes → Submit a copy of the US Army Corps of Engineers (Corps) Jurisdictional Determination letter. Proceed to Item 2.D

C. Is an indirect wetland impact proposed?

No → Proceed to Item 3 Yes → Submit a copy of the US Army Corps of Engineers (Corps) Jurisdictional Determination letter. Proceed to Item 2.D

D. Does the Corps regulate the onsite wetland?

No → Proceed to Item 2.F Yes → Proceed to Item 2.E

E. Will the Corps regulated wetland be impacted by the development?

No → Proceed to Item 5 Yes → Submit a copy of the Corps permit application. (Approved Corps permit required prior to issuance.) Proceed to Item 4

F. Will the isolated wetland or associated buffer be impacted by the development?

No → Proceed to Item 5 Yes → Proceed to Item 4

3. OFFSITE WETLANDS (If multiple wetlands are located offsite within 100 feet of the site, submit a separate Schedule W for each wetland)

A. Is there an offsite wetland located within 100 feet of the development site?

No → Proceed to Item 3.E Yes → Delineate wetland per §603.5 and follow §603.6. Proceed to Item 3.B

B. Can a Corps Jurisdictional Determination letter be obtained?

No → Consider high quality isolated wetland Proceed to Item 2.C Yes → Proceed to Item 2.C

C. Does the wetland buffer extend onto the development?

No → Proceed to Item 3.E Yes → Proceed to Item 3.D

D. Is the wetland or associated buffer impacted by the development?

No → Proceed to Item 3.E Yes → Proceed to Item 4

E. Is an indirect wetland impact proposed?

No → Proceed to Item 5 Yes → Proceed to Item 4

SCHEDULE W

WMO Permit Number: _____

WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

4. MITIGATION FOR WETLAND IMPACTS

- Standard Isolated High Quality Isolated Corps Jurisdictional

Prepare the wetland/buffer submittal and briefly describe the impacts and proposed mitigation, below. (If the wetland is a Corps regulated wetland, briefly describe the wetland impacts and mitigation proposed under the Corps permit.)

Permanent impacts proposed to entirety of Wetland 3 within study area for a total of 0.1 acres to be mitigated at a 1.5:1 ratio for a total of 0.15 acres to be mitigated.

5. STORMWATER DETENTION WITHIN THE WETLAND

A. Is stormwater detention proposed within the wetland?

- No → Proceed to Item 6 Yes → Proceed to Item 5.B

B. Is the wetland regulated by the Corps and is a Corps permit required for the development?

- No → Proceed to Item 5.D Yes → Proceed to Item 5.C

C. Did the Corps approve placing detention in the wetland?

- No → Detention not allowed Yes → Submit a copy of the approved Corps permit
Proceed to Item 6

D. Is the wetland considered a high quality isolated wetland?

- No → Hydrologic study required Yes → Detention not allowed

6. RIPARIAN ENVIRONMENTS

A. Is there a riparian environment located onsite?

- No → Proceed to Item 8 Yes → Proceed to Items 6.B and 6.C

B. Indicate the conditions that apply:

- Jurisdictional Waters of the U.S. (50-ft buffer from OHWM)
 Jurisdictional or isolated waters with BSC of "A" or "B" or BSS Streams (100-ft buffer from OHWM)
 Isolated Waters (30-ft buffer from OHWM)

C. Is the riparian environment adversely impacted by the development?

- No → Proceed to Item 8 Yes → Proceed to Item 7

7. MITIGATION FOR RIPARIAN IMPACTS

A. Prepare a riparian submittal and briefly describe the impacts and proposed mitigation: _____

8. WETLAND SPECIALIST CERTIFICATION

NOTE: If the answers to Items 2.D, 2.F, 3.E, 5.A or 6.C are yes, prepare the appropriate wetland, buffer and riparian environment submittals with supporting documentation along with the Watershed Management Permit application. (Electronic signatures are not accepted.)

Company/Agency: *Kimley-Horn & Associates, Inc.*

Wetland Specialist: *Sarah Skowronski* Title: *Environmental Scientist*

Signature: *[Signature]* Date: *11/14/2025*

SCHEDULE W

WMO Permit Number: _____

WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

NAME OF PROJECT: 159th & LaGrange Retail

Complete all items, unless instructed to proceed to later section.

1. WETLAND IDENTIFICATION: Wetland 4 - PEMLC - 0.03 acres

2. ONSITE WETLANDS (If multiple wetlands are located onsite, submit a separate Schedule W for each wetland)

A. Is a wetland or farmed wetland located on the property interest?

No → Proceed to Item 3 Yes → Delineate wetland per §603.3. Proceed to Item 2.B

B. Is the onsite wetland within the development area or within 100 feet of the development?

No → Proceed to Item 2.C Yes → Submit a copy of the US Army Corps of Engineers (Corps) Jurisdictional Determination letter. Proceed to Item 2.D

C. Is an indirect wetland impact proposed?

No → Proceed to Item 3 Yes → Submit a copy of the US Army Corps of Engineers (Corps) Jurisdictional Determination letter. Proceed to Item 2.D

D. Does the Corps regulate the onsite wetland?

No → Proceed to Item 2.F Yes → Proceed to Item 2.E

E. Will the Corps regulated wetland be impacted by the development?

No → Proceed to Item 5 Yes → Submit a copy of the Corps permit application. (Approved Corps permit required prior to issuance.) Proceed to Item 4

F. Will the isolated wetland or associated buffer be impacted by the development?

No → Proceed to Item 5 Yes → Proceed to Item 4

3. OFFSITE WETLANDS (If multiple wetlands are located offsite within 100 feet of the site, submit a separate Schedule W for each wetland)

A. Is there an offsite wetland located within 100 feet of the development site?

No → Proceed to Item 3.E Yes → Delineate wetland per §603.5 and follow §603.6. Proceed to Item 3.B

B. Can a Corps Jurisdictional Determination letter be obtained?

No → Consider high quality isolated wetland Proceed to Item 2.C Yes → Proceed to Item 2.C

C. Does the wetland buffer extend onto the development?

No → Proceed to Item 3.E Yes → Proceed to Item 3.D

D. Is the wetland or associated buffer impacted by the development?

No → Proceed to Item 3.E Yes → Proceed to Item 4

E. Is an indirect wetland impact proposed?

No → Proceed to Item 5 Yes → Proceed to Item 4

SCHEDULE W

WMO Permit Number: _____

WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

4. MITIGATION FOR WETLAND IMPACTS

- Standard Isolated High Quality Isolated Corps Jurisdictional

Prepare the wetland/buffer submittal and briefly describe the impacts and proposed mitigation, below. (If the wetland is a Corps regulated wetland, briefly describe the wetland impacts and mitigation proposed under the Corps permit.)

Wetland 4 will be permanently impacted in totality
however it is exempt from mitigation due to being
less than 0.01 acres per section 404 9.A.

5. STORMWATER DETENTION WITHIN THE WETLAND

- A. Is stormwater detention proposed within the wetland?
 No → Proceed to Item 6 Yes → Proceed to Item 5.B
- B. Is the wetland regulated by the Corps and is a Corps permit required for the development?
 No → Proceed to Item 5.D Yes → Proceed to Item 5.C
- C. Did the Corps approve placing detention in the wetland?
 No → Detention not allowed Yes → Submit a copy of the approved Corps permit
Proceed to Item 6
- D. Is the wetland considered a high quality isolated wetland?
 No → Hydrologic study required Yes → Detention not allowed

6. RIPARIAN ENVIRONMENTS

- A. Is there a riparian environment located onsite?
 No → Proceed to Item 8 Yes → Proceed to Items 6.B and 6.C
- B. Indicate the conditions that apply:
 Jurisdictional Waters of the U.S. (50-ft buffer from OHWM)
 Jurisdictional or isolated waters with BSC of "A" or "B" or BSS Streams (100-ft buffer from OHWM)
 Isolated Waters (30-ft buffer from OHWM)
- C. Is the riparian environment adversely impacted by the development?
 No → Proceed to Item 8 Yes → Proceed to Item 7

7. MITIGATION FOR RIPARIAN IMPACTS

- A. Prepare a riparian submittal and briefly describe the impacts and proposed mitigation: _____

8. WETLAND SPECIALIST CERTIFICATION

NOTE: If the answers to Items 2.D, 2.F, 3.E, 5.A or 6.C are yes, prepare the appropriate wetland, buffer and riparian environment submittals with supporting documentation along with the Watershed Management Permit application. (Electronic signatures are not accepted.)

Company/Agency: Kimley-Horn & Associates, Inc.
Wetland Specialist: Sarah Skowronski Title: Environmental Scientist
Signature: [Signature] Date: 11/13/2025

SCHEDULE W

WMO Permit Number: _____

WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

NAME OF PROJECT: 159th & LaGrange Retail

Complete all items, unless instructed to proceed to later section.

1. WETLAND IDENTIFICATION: Wetland 5 - PEM1C - 0.23 acres

2. ONSITE WETLANDS (If multiple wetlands are located onsite, submit a separate Schedule W for each wetland)

A. Is a wetland or farmed wetland located on the property interest?

No → Proceed to Item 3 Yes → Delineate wetland per §603.3. Proceed to Item 2.B

B. Is the onsite wetland within the development area or within 100 feet of the development?

No → Proceed to Item 2.C Yes → Submit a copy of the US Army Corps of Engineers (Corps) Jurisdictional Determination letter. Proceed to Item 2.D

C. Is an indirect wetland impact proposed?

No → Proceed to Item 3 Yes → Submit a copy of the US Army Corps of Engineers (Corps) Jurisdictional Determination letter. Proceed to Item 2.D

D. Does the Corps regulate the onsite wetland?

No → Proceed to Item 2.F Yes → Proceed to Item 2.E

E. Will the Corps regulated wetland be impacted by the development?

No → Proceed to Item 5 Yes → Submit a copy of the Corps permit application. (Approved Corps permit required prior to issuance.) Proceed to Item 4

F. Will the isolated wetland or associated buffer be impacted by the development?

No → Proceed to Item 5 Yes → Proceed to Item 4

3. OFFSITE WETLANDS (If multiple wetlands are located offsite within 100 feet of the site, submit a separate Schedule W for each wetland)

A. Is there an offsite wetland located within 100 feet of the development site?

No → Proceed to Item 3.E Yes → Delineate wetland per §603.5 and follow §603.6. Proceed to Item 3.B

B. Can a Corps Jurisdictional Determination letter be obtained?

No → Consider high quality isolated wetland Proceed to Item 2.C Yes → Proceed to Item 2.C

C. Does the wetland buffer extend onto the development?

No → Proceed to Item 3.E Yes → Proceed to Item 3.D

D. Is the wetland or associated buffer impacted by the development?

No → Proceed to Item 3.E Yes → Proceed to Item 4

E. Is an indirect wetland impact proposed?

No → Proceed to Item 5 Yes → Proceed to Item 4

SCHEDULE W

WMO Permit Number: _____

WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

4. MITIGATION FOR WETLAND IMPACTS

- Standard Isolated High Quality Isolated Corps Jurisdictional

Prepare the wetland/buffer submittal and briefly describe the impacts and proposed mitigation, below. (If the wetland is a Corps regulated wetland, briefly describe the wetland impacts and mitigation proposed under the Corps permit.)

Permanent impacts proposed to entirety of Wetland 5 within study area for a total of 0.23 acres to be mitigated at a 1.5:1 ratio for a total of 0.35 acres to be mitigated.

5. STORMWATER DETENTION WITHIN THE WETLAND

A. Is stormwater detention proposed within the wetland?

- No → Proceed to Item 6 Yes → Proceed to Item 5.B

B. Is the wetland regulated by the Corps and is a Corps permit required for the development?

- No → Proceed to Item 5.D Yes → Proceed to Item 5.C

C. Did the Corps approve placing detention in the wetland?

- No → Detention not allowed Yes → Submit a copy of the approved Corps permit
Proceed to Item 6

D. Is the wetland considered a high quality isolated wetland?

- No → Hydrologic study required Yes → Detention not allowed

6. RIPARIAN ENVIRONMENTS

A. Is there a riparian environment located onsite?

- No → Proceed to Item 8 Yes → Proceed to Items 6.B and 6.C

B. Indicate the conditions that apply:

- Jurisdictional Waters of the U.S. (50-ft buffer from OHWM)
 Jurisdictional or isolated waters with BSC of "A" or "B" or BSS Streams (100-ft buffer from OHWM)
 Isolated Waters (30-ft buffer from OHWM)

C. Is the riparian environment adversely impacted by the development?

- No → Proceed to Item 8 Yes → Proceed to Item 7

7. MITIGATION FOR RIPARIAN IMPACTS

A. Prepare a riparian submittal and briefly describe the impacts and proposed mitigation: _____

8. WETLAND SPECIALIST CERTIFICATION

NOTE: If the answers to Items 2.D, 2.F, 3.E, 5.A or 6.C are yes, prepare the appropriate wetland, buffer and riparian environment submittals with supporting documentation along with the Watershed Management Permit application. (Electronic signatures are not accepted.)

Company/Agency: Kimley-Horn & Associates, Inc.

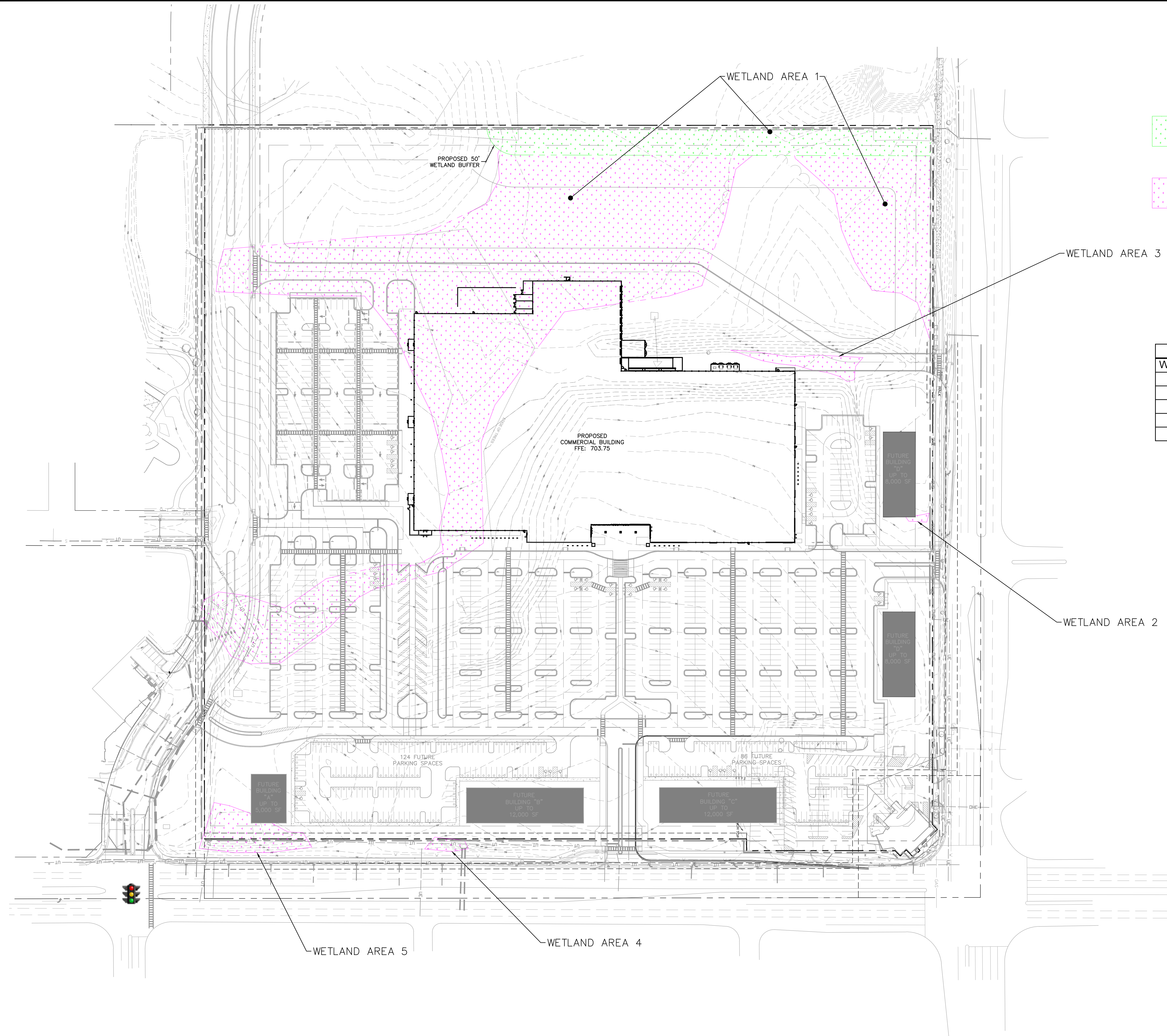
Wetland Specialist: Sarah Skowronski

Title: Environmental Scientist

Signature: [Handwritten Signature]

Date: 11/13/2025

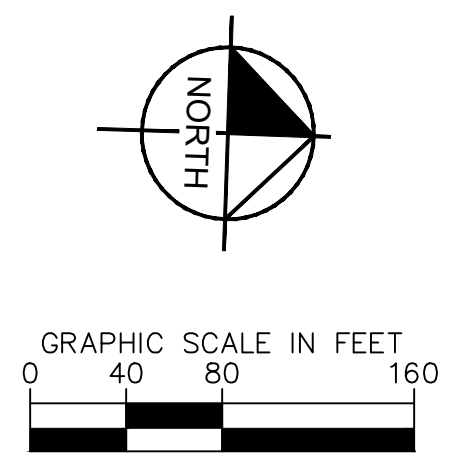
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



LEGEND

	WETLAND BUFFER
	WETLANDS TO BE IMPACTED

Wetland Areas (SF)			
Wetland	To Remain	Wetland Buffer	Impacted Wetlands
1.)	0	35,172.78	307,003.18
2.)	0	0	412.96
3.)	0	0	4,293.61
4.)	0	0	1,267.21
5.)	0	0	10,051.32
	0.00	35,172.78	323,028.28



No.	REVISIONS	DATE	BY

Kimley»Horn
 © 2025 KIMLEY-HORN AND ASSOCIATES, INC.
 4201 WARRENVILLE, IL 60555
 630-487-5550
 WWW.KIMLEY-HORN.COM

LICENSED PROFESSIONAL	
KHA PROJECT	
DATE	
SCALE AS SHOWN	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
DATE:	

WETLAND IMPACT EXHIBIT

159TH & LAGRANGE RETAIL
 CITY OF ORLAND PARK ILLINOIS

ATTACHMENT E

USACE Approved Jurisdictional Determination



REPLY TO
ATTENTION OF:

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

September 14, 2020

Operations Division
Regulatory Branch
LRC-2012-00897

SUBJECT: Jurisdictional Determination for the Property Located Southwest of Route 45 & 159th Street in Orland Park, Cook County, Illinois (Latitude 41.6001683698365, Longitude - 87.855091082741)

Peter Kattos
4401 West 95th Street
Oak Lawn, Illinois 60453

Dear Mr. Kattos:

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-2012-00897. Please reference this number in all future correspondence concerning this project.

Following a review of the information you submitted, this office has determined that there are no waterways, wetlands or other areas considered "waters of the United States" under Corps of Engineers jurisdiction at the site.

Area 1 & Area 2 have been determined to be excluded water features, and therefore not subject to Federal regulation. Please be informed that this office does not concur with the boundaries of waters not under the jurisdiction of this office.

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 and Assessment Report dated July 26, 2020, 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. For projects located in unincorporated and unauthorized municipalities in Cook County, please contact the Metropolitan Water Reclamation District of Greater Chicago at (312) 751-3247. For projects in incorporated areas of Cook County, contact the authorized municipality for information related to the Watershed Management Ordinance.

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,

Kathleen G. Chernich
Chief, East Section
Regulatory Branch

Enclosures

Copy Furnished w/out Enclosures

Cook County Building and Zoning (Michael Fazio)
Metropolitan Water Reclamation District of Greater Chicago (Dan Feltes)
V3 Companies (Tom Slowinski)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Peter Kattos

File Number: LRC-2012-00897

Date: September
14, 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: