



# LOWER MINNESOTA RIVER WATERSHED DISTRICT

## Executive Summary for Action

Lower Minnesota River Watershed District Board of Managers Meeting

Wednesday, June 16, 2021

### **Agenda Item**

#### **Item 6. I. - Permits & Project Reviews**

#### **Prepared By**

Linda Loomis, Administrator

#### **Summary**

The project proposes to construct 135 single family residential housing units at the intersection of Eagle Creek Boulevard and Pike Lake Road. The Prior Lake Outlet Channel runs through the property and the applicant has applied for a permit from the DNR to conduct work in the public water. The LMRWD has submitted its comments on the application for the work in public waters to the DNR.

A review of the project by LMRWD staff is attached. Although there are a few discrepancies in the documents reviewed by the LMRWD, staff is recommending conditional approval.

#### **Attachments**

Technical Memorandum dated June 4, 2021 Re: Whispering Waters LMRWD No. 2021-016

#### **Recommended Action**

Motion to conditionally approve Whispering Waters LMRWD Permit No. 2021-016, resolution of the comments provided in the Technical Memorandum and receipt of the NPDES permit



# Technical Memorandum

To: Linda Loomis, Administrator  
Lower Minnesota River Watershed District

From: Katy Thompson, PE, CFM  
Kaci Fisher, Environmental Specialist

Cc: Taylor Huinker  
Minnesota Department of Natural Resources

Date: June 4, 2021

Re: Whispering Waters (LMRWD No. 2021-016)

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Keyland Homes (the applicant) has applied for an individual project permit from the Lower Minnesota River Watershed District (LMRWD) to develop a single-family residential development, as shown in Figure 1. The applicant's engineer, Probe Engineering, has provided site plans for Whispering Waters (Project) along with the permit application.

The proposed Project consists of constructing 135 residential lots with associate streets, utilities, sidewalks, and stormwater management facilities. The Project would disturb approximately 52.3 acres and create 16.1 acres of proposed impervious surfaces. The Project is not located within the High Value Resource Area, Steep Slopes Overlay District, or 100-year floodplain, and the applicant proposes to commence construction in summer 2021.

Because the City of Shakopee (City) does not have its LMRWD municipal LGU permit, this Project requires an LMRWD individual permit and, as such, is subject to an LMRWD permitting review.

In addition to our review of the LMRWD individual project permit application, the Minnesota Department of Natural Resources (MnDNR) has requested comments on the Project through its MPARS system. This memo addresses both reviews.

## Summary

<u>Project Name:</u>	Whispering Waters
<u>Purpose:</u>	Residential development
<u>Project Size:</u>	52.3 acres disturbed; 1.00 acres existing impervious; 16.1 acres proposed impervious; net increase of 15.1 acres new impervious
<u>Location:</u>	7556 Eagle Creek Blvd, Shakopee, MN 55379 (Parcels 271390010, 271390080, 279140120, 279140121, 279140122, 279140130)
<u>LMRWD Rules:</u>	Rule B—Erosion and Sediment Control Rule C—Floodplain and Drainage Rule D—Stormwater Management
<u>Recommended Board Action:</u>	Conditional approval

## Discussion

The District received the following documents for review:

- LMRWD online permit application; received April 14, 2021
- Fee of \$1,500; received April 14, 2021
- Project map; received April 14, 2021
- Construction plan set by Probe Engineering, dated March 19, 2019; received April 14, 2021; revised April 29, 2021; and received May 13, 2021
- Stormwater Management Memorandum to Probe Engineering by Kimley-Horn, dated December 18, 2020; revised March 16, 2021; and received April 14, 2021
- MIDS Analysis Technical Memorandum by Kimley-Horn, dated May 11, 2021; received May 13, 2021
- Hydraulic Data Form for the new Prior Lake Outlet Channel Crossings memo to the MnDNR by Kimley-Horn, dated May 11, 2021; received May 13, 2021
- Wetland Delineation Report, dated October 2020; received April 14, 2021, and May 13, 2021
- Wetland Delineation Report, dated May 2020; received May 13, 2021
- MPARS application, dated April 6, 2021; received May 10, 2021
- Stormwater outfall plans by Kimley-Horn; received May 10, 2021
- Box culvert design by Probe Engineering; dated April 20, 2021, received May 10, 2021

The District received all required information for the permit review and rendered the

application complete on May 13, 2021.

*Background*

In 2020, this development was previously called Keyland Development when LMRWD was asked to comment on the Notice of Application for a wetland delineation (LMRWD No. 2020-107 memo, attached), which identified wetland adjacent to the Prior Lake Outlet Control (PLOC) that flows through the property. The PLOC is an artificial outlet for Prior Lake constructed in 1983. There is a Memorandum of Agreement among the City of Prior Lake, the City of Shakopee, the Shakopee Mdewakanton Sioux Community, and the Prior Lake-Spring Lake Watershed District (PLSLWD) in which the PLSLWD administers channel operations. The section of the PLOC within the Project is also an MnDNR public water. The applicant proposes to construct three culvert crossings over the PLOC.

*Rule B—Erosion and Sediment Control*

The District regulates land-disturbing activities that affect one acre or more under Rule B. The proposed Project would disturb approximately 52.3 acres within the LMRWD boundary. The applicant has provided an erosion and sediment control plan and a Stormwater Pollution Prevention Plan.

The Project generally complies with Rule B; however, a copy of the NPDES permit and contact information for the contractor are still needed.

*Rule C—Floodplain and Drainage Alteration*

As discussed, the Project proposes to cross the PLOC. The District regulates the placement of fill below the 100-year flood elevation and alterations within drainage ways within the watershed in accordance with Minnesota Statute 103F and LMRWD Rule C. The MPARS application states that 2,970 cubic yards of fill will be placed as part of the culvert crossings in the PLOC. The applicant has provided a no-rise certification as part of the Hydraulic Data Form memo by Kimley-Horn that shows despite the proposed fill and increased impervious surfaces associated with the Project, the creation of the proposed stormwater ponds and more efficient crossings will reduce the overall flows entering the PLOC and lower the 100-year water surface elevations throughout the Project reach.

The Project complies with Rule C.

*Rule D—Stormwater Management*

The Project proposes a total of 16.1 to 16.99 acres of new impervious surfaces with 0.6 to 1.0 acres of existing impervious. This reflects a discrepancy in total impervious area among the permit application, stormwater management memo, and MPARS application.

Nevertheless, the Project proposes more than one acre of new impervious surfaces, triggering Rule D. The applicant proposes to use four wet ponds with infiltration benches (Ponds 1 through 4) and possibly another infiltration basin (Pond 5).

The provided Stormwater Management Memorandum indicates the Project will provide rate control through four clay-lined wet ponds with infiltration benches and one dry infiltration basin. Based on the provided geotechnical report, the Project area is predominately sands, overlain by a clay layer that will allow for significant infiltration when removed.

The Project is also located within the City's Blue Lake Drainage System and is subject to more stringent stormwater discharge limitations, including 0.05 cfs/acre maximum for the 10-year event. The combination of the five proposed BMPs outlined in the Stormwater Management Memorandum show a significant decrease in existing discharge rates for the 2-, 10-, and 100-year design events, meeting LMRWD's rate control requirement.

Depending on the total impervious area proposed, the applicant is required to provide up to 61,674 cubic feet of volume reduction to meet Rule D's requirements. With the inclusion of infiltration benches on the wet ponds, the applicant proposes to infiltrate 141,775 cubic feet of stormwater runoff, significantly more than what is required and meeting the District's volume reduction requirement.

Rule D also requires a no net increase in total phosphorus (TP) and total suspended solids (TSS) from existing conditions. The MIDS data show the proposed BMPs will provide a 94 percent decrease in both the TP and TSS loads from the site.

LMRWD requires applicants develop and adhere to a stormwater maintenance plan for the proposed stormwater infrastructure. The City has confirmed that the proposed BMPs will be incorporated as part of its MS4 system and will not require a maintenance agreement.

Although the Project appears to meet the requirements in Rule D, we noted several discrepancies that should be addressed to issue an LMRWD permit. We offer the following comments regarding the provided documents:

1. Please provide clarification on the proposed BMPs; the May 13, 2021 construction plans indicate only four BMPs, whereas the provided Stormwater Management Memorandum and MIDS modeling show five BMPs.
2. The construction plan set includes revised grading plans; however, the high water levels (HWLs) delineated on Sheet 42 do not appear to use the existing or proposed grades consistently. Please provide clarification.
3. Also on Sheet 42, the HWL in the PLOC (EI. 790.6) is higher than the proposed ground elevations and appears to overtop into Pond 4, but the HWL in Pond 4 is

only El. 785.37. Please clarify how Pond 4 will interact with the PLOC. The MPARS application provides the velocities through the proposed pond outfall structures. We noted the Pond 1 outfall has an outlet velocity of 8.94 feet per second, but no outlet protection is shown on the plans—what type of outlet protection will be provided to prevent scour of the PLOC at this outlet? Similarly for Ponds 4 and 5, the outlet velocity is proposed to be 6.73 and 7.46 feet per second, respectively, but no outlet protection is noted. Please provide further information.

### **Recommendations**

Despite the discrepancies noted above, assuming the maximum impervious areas provided, the Project meets the requirements outlined in the LMRWD rules. We recommend conditional approval of the Whispering Waters permit application, pending the resolution of the provided comments and receipt of the NPDES permit. We will submit this memo to the MnDNR as part of the MPARS comment period and continue to work with the applicant to resolve the outstanding items.

### **Attachments**

- Figure 1—Whispering Waters Location Map
- LMRWD No. 2020-107 Keyland Development, LLC—Notice of Application Memo



Figure 1: Whispering Waters Project Location



**LEGEND**

-  Project Location
-  Public Waterways
-  LMRWD Boundary
-  Scott Co. Parcels
-  Whispering Waters
-  Lot
-  Road
-  Pond
-  Infiltration bench
-  Basin

**LMRWD Watershed Location Map**





# Technical Memorandum

To: Linda Loomis, Administrator  
Lower Minnesota River Watershed District

From: Katy Thompson, PE, CFM  
Della Schall Young, CPESC, PMP

Date: June 24, 2020

Re: Keyland Development, LLC—Notice of Application (No. 2020-107)

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Keyland Development, LLC, has applied for a Minnesota Wetland Conservation Act wetland delineation with the Minnesota Board of Water and Soil Resources (BWSR). The City of Shakopee (City) is the local government unit (LGU) for the Wetland Conservation Act (WCA) and has provided the Lower Minnesota River Watershed District (District or LMRWD) with the Notice of Application and wetland delineation report for review of the proposed Keyland Development.

The Technical Evaluation Panel (TEP) representatives from BWSR, the Scott County Soil and Water Conservation District (SWCD), City of Shakopee, LMRWD (represented by Young Environmental Consulting Group [Young Environmental]), and applicant's consultant (Wenck Associates) met on site on June 16, 2020, to review the wetland delineation report completed on April 30, 2020, by Wenck Associates.

The proposed project associated with this Notice of Application is unknown at this time because the information has not been shared with the District. As detailed in the wetland delineation report, Wenck Associates reviewed the site using a desktop and field analysis and is requesting a final determination of its delineated boundaries.

## Summary

Project Name: Keyland Development

Purpose: WCA Notice of Application



<u>Project Size:</u>	42 acres
<u>Location:</u>	South of Eagle Creek Parkway (CR 16) and west of Foothill Trail South, Shakopee, MN (Parcel IDs 279140120, 279140121, 279140122, 279140130, and 271390010)
<u>Recommended Board Action:</u>	None, information only

### Wetland Delineation Report Summary

The proposed development area consists of a farmstead, agricultural and pastureland, and a forested area with the Prior Lake Outlet Channel (PLOC) roughly running through the middle of the project area. The National Wetland Inventory (NWI) shows wetland areas along the length of the PLOC channel, between the banks. From the delineation report, the underlying soils are primarily loams with a low hydric rating, except for alluvium in the PLOC streambed, which have a very high hydric rating. Following the desktop analysis, Wenck Associates completed an on-site investigation of two areas, a forested area in the southeast corner of the property and the length of the PLOC channel on the property (**Figure 1**).

### Site Visit Findings

The TEP committee met on site with Wenck Associates on June 17, 2020, to verify the conclusions in the field from the wetland delineation report. First, the group walked to Investigation Point 1 (IP1), located in the forested area in the southeast corner of the project site (**Figure 1** and **site photos**). Wenck Associates explained that this area was identified during the desktop analysis, but when reviewed in the field, it was determined that this area is not a wetland because of the lack of wetland hydrology and hydric soils. Next, the group walked to the wetlands located along the PLOC, starting with Wetland 3, and walking down to Wetland 1 along the right bank. These wetlands were all confined to the floodplain within the top of the PLOC banks. Active erosion was noted on the outside bend of the PLOC in the recently restored reach, and photos of the erosion area are included in the site visit documentation. An electric fence bordered the PLOC, which interfered with access to Wetland 3, and according to Wenck, is used for cattle management activities within the channel.

An additional review completed by Young Environmental determined that the proposed site is not in the preliminary FEMA floodplain maps for Scott County nor within the District's High Value Resource Area or Steep Slope overlay districts.

The TEP agreed with the wetland boundaries as delineated along the PLOC and agreed with the determination that the area near IP1 was a non-wetland.

### **Recommendations**

No action is required. The applicant and the City are encouraged to maintain coordination with the District.

### **Attachments:**

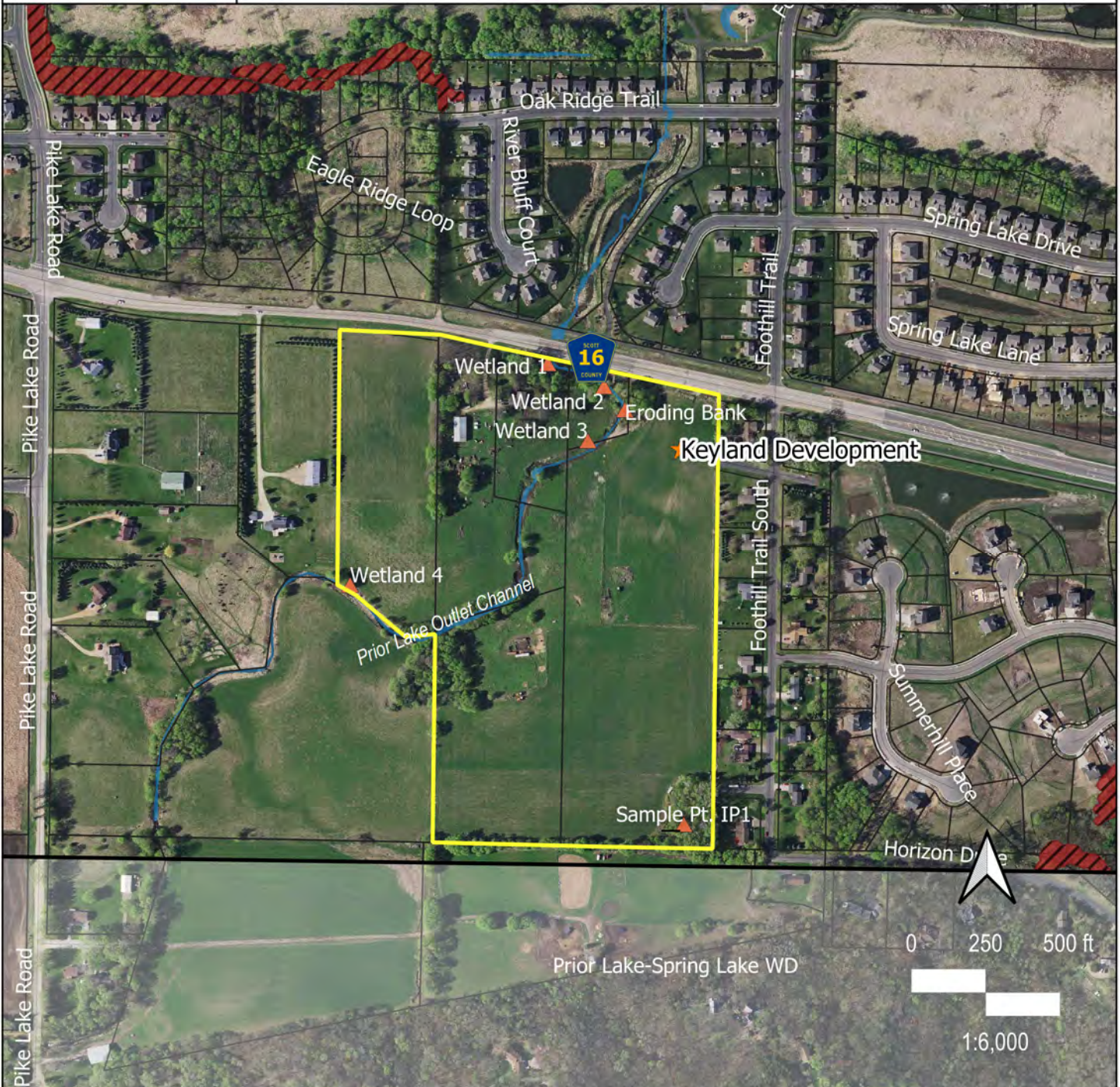
Figure 1. Proposed Keyland Development Project Location Map

June 17, 2020, site photos



LOWER MINNESOTA RIVER  
WATERSHED DISTRICT

# FIGURE 1: Keyland Development NOA Review 17-June-2020



## LEGEND

- |                               |                      |                         |
|-------------------------------|----------------------|-------------------------|
| Project Area                  | Scott Co. Floodplain | Calcareous Fens         |
| Site Photo Locations          | 100-year Floodplain  | HVRA Overlay District   |
| Scott County Parcels          | Floodway             | Streams and Waterbodies |
| LMRWD Boundary                | 500-year Floodplain  |                         |
| Steep Slopes Overlay District | Protected by Levee   |                         |



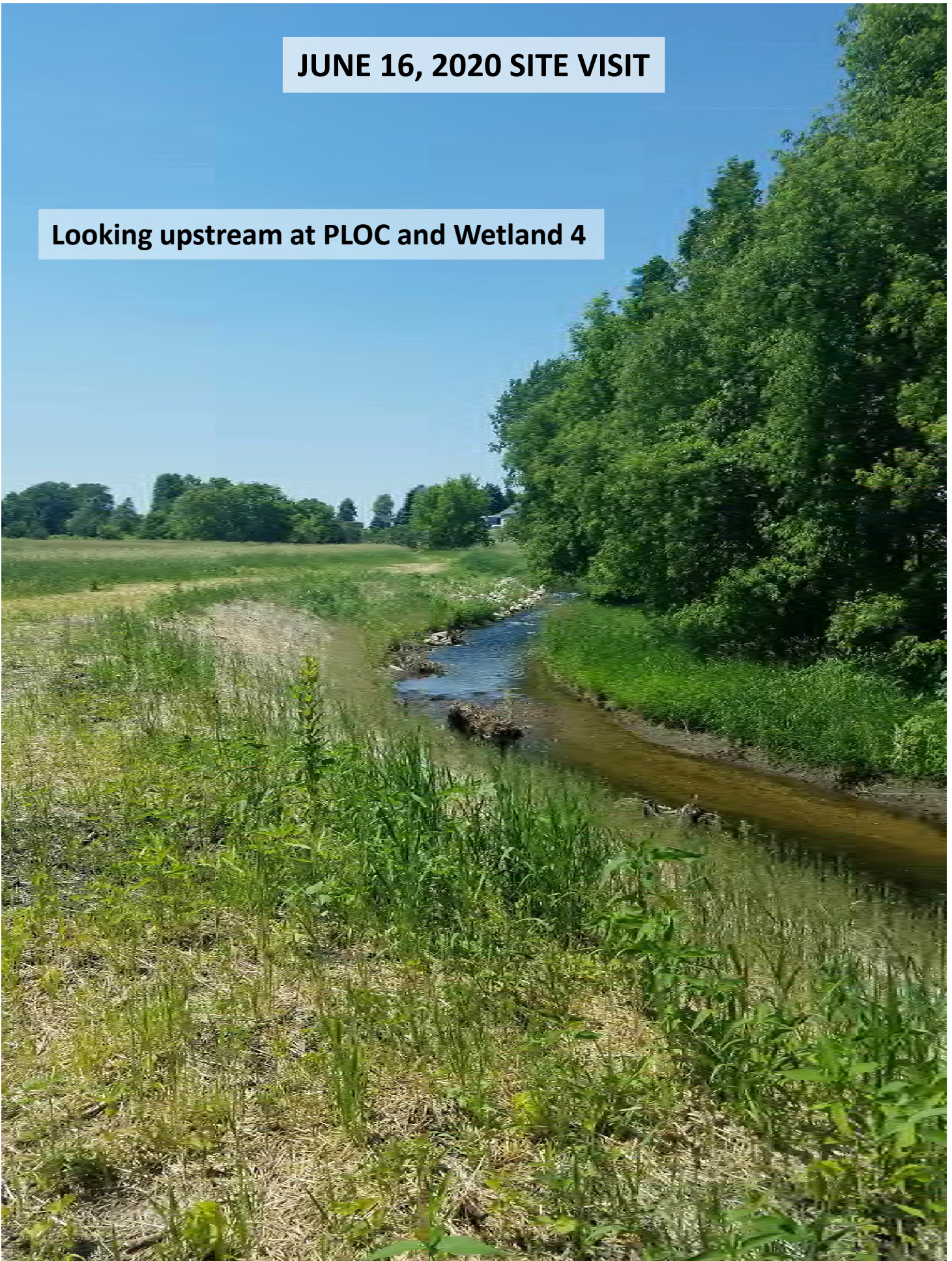
**JUNE 16, 2020 SITE VISIT**

**Sample Point IP1 – hydrophytic vegetation present, but no hydric soils or evidence of wetland hydrology**



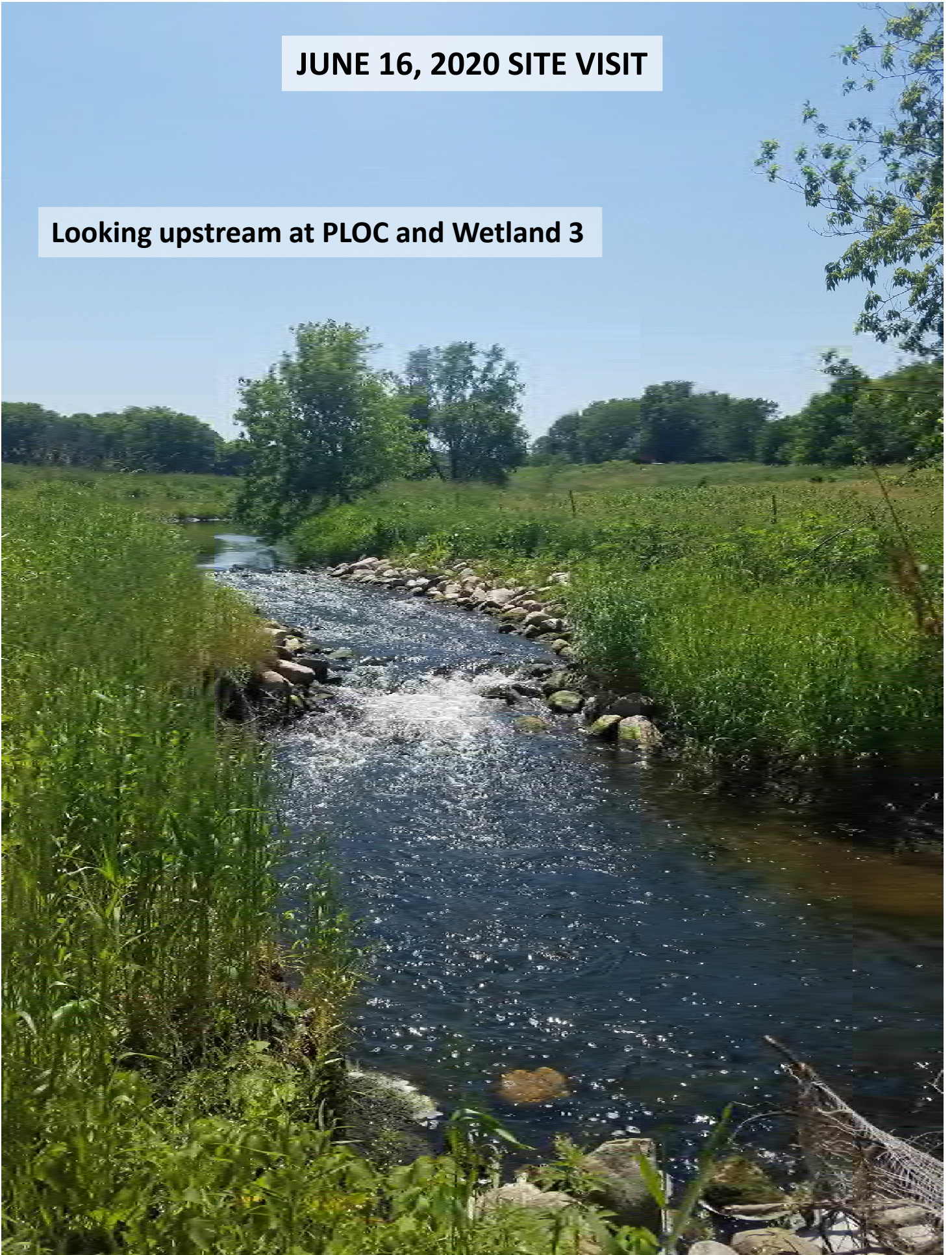
**JUNE 16, 2020 SITE VISIT**

**Looking upstream at PLOC and Wetland 4**



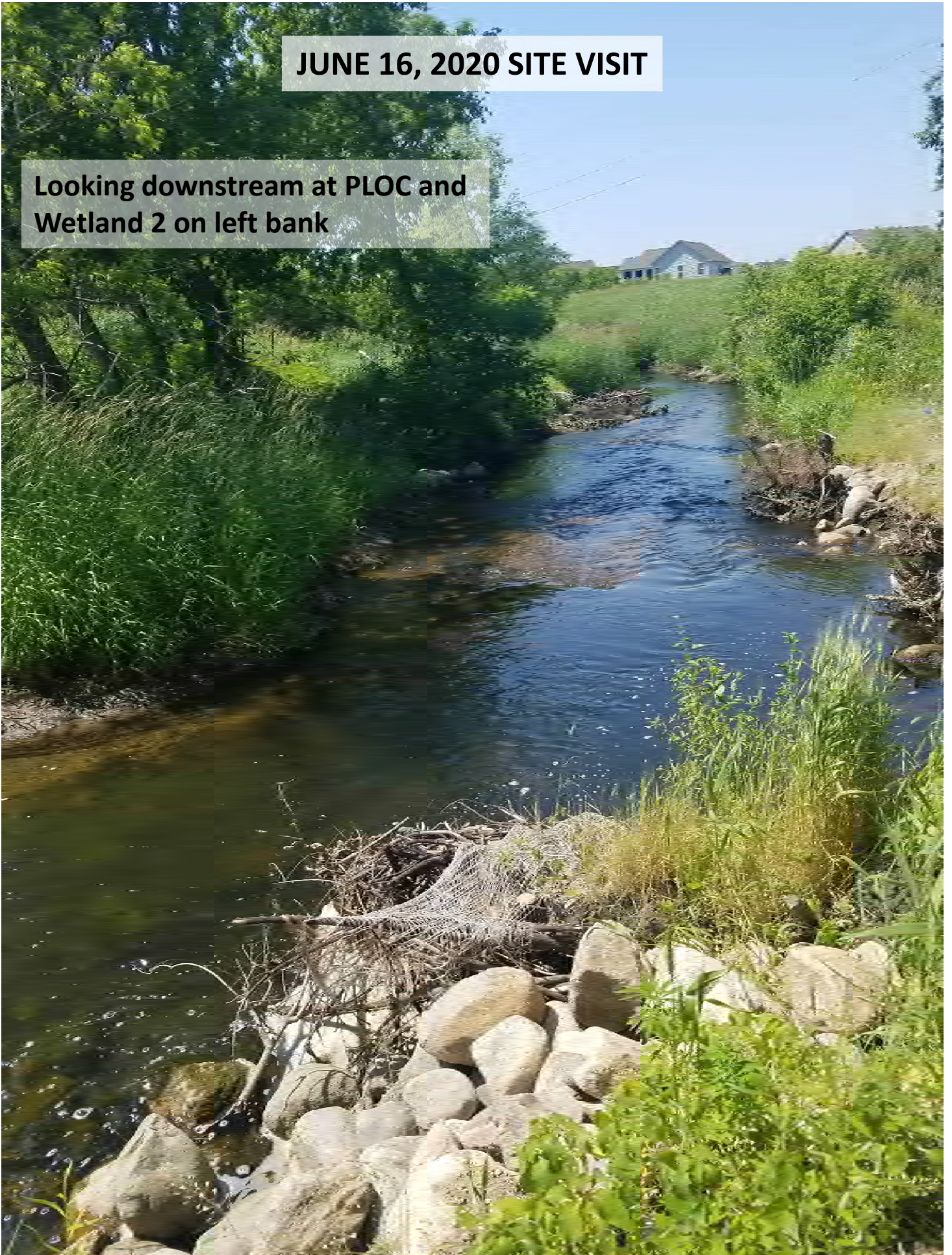
**JUNE 16, 2020 SITE VISIT**

**Looking upstream at PLOC and Wetland 3**



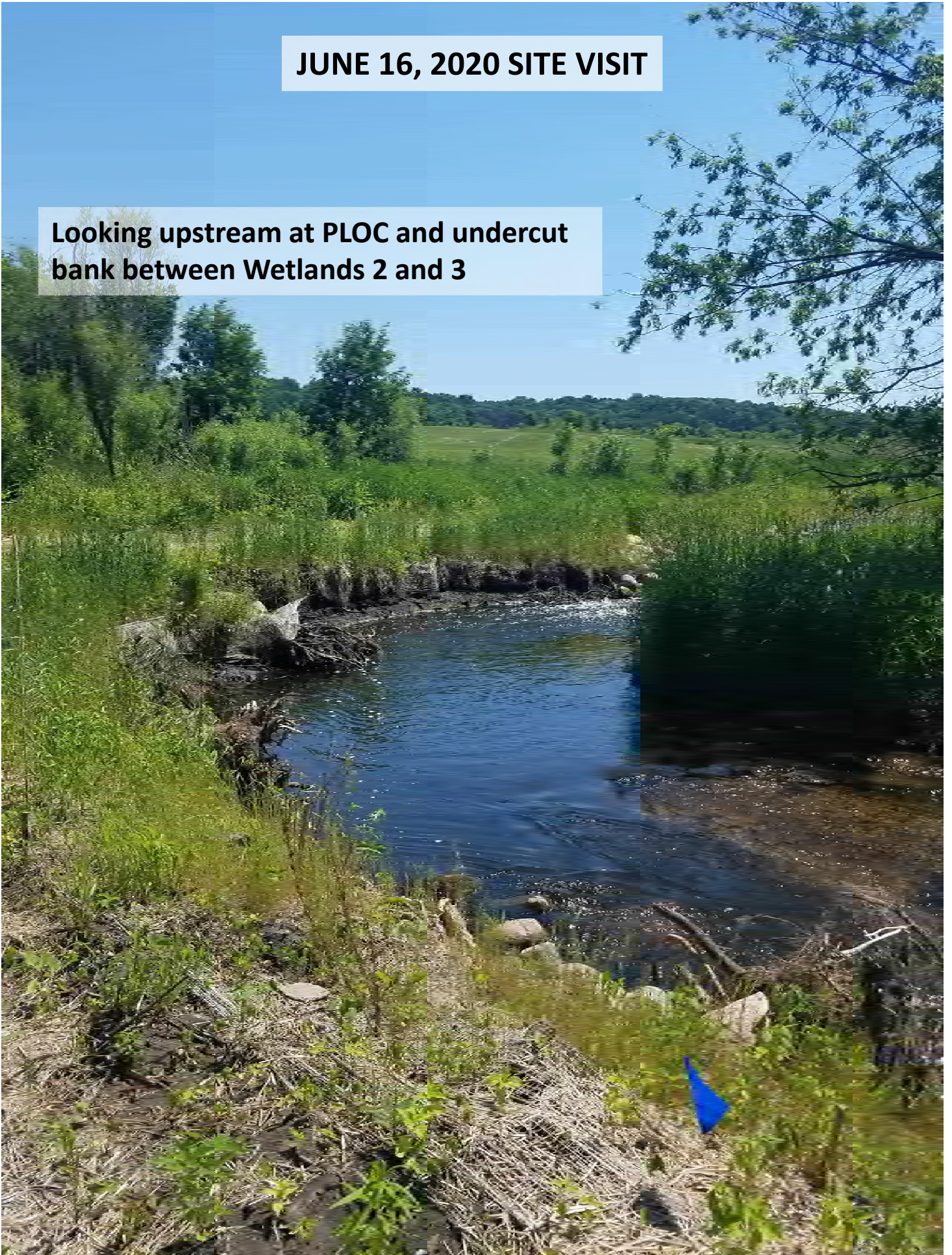
**JUNE 16, 2020 SITE VISIT**

**Looking downstream at PLOC and  
Wetland 2 on left bank**



**JUNE 16, 2020 SITE VISIT**

**Looking upstream at PLOC and undercut bank between Wetlands 2 and 3**





**JUNE 16, 2020 SITE VISIT**

**Looking upstream at PLOC and Wetland 1**

