

September 22, 2022

Shawn Puzen  
Mead & Hunt, Inc.  
1345 North Rd B  
Green Bay, WI 54313

Subject: Shoreline Monitoring of Archaeological Sites and Erosion Check on the Gile Flowage Storage Reservoir (FERC# 15055) in Iron County, Wisconsin.  
TRC Project No. 450488.0000  
WIARC No. 285

Dear Mr. Puzen:

On August 25 and 26, 2022, a TRC archaeologist visited and inspected the shoreline of the Gile Flowage Storage Reservoir (Reservoir or Project) on the West Fork of the Montreal River near Montreal, Wisconsin (Figure 1). The archaeologist examined the shoreline (including islands) at known archaeological sites and inspected the remainder of the shoreline to identify erosion locations and any new archaeological sites that may have been exposed at those locations. Subsurface exploration (shovel testing) was not a part of the shoreline monitoring survey since that was not a requirement of the 1993 Programmatic Agreement which guided this survey. Due to the large size of the Reservoir, the survey was conducted by boat to facilitate access to all segments of the shoreline.

Only one cultural resource site has been reported adjacent to the Reservoir, the Montreal Company Historic District (Figures 1, 2, 4A, 4B). An inspection was conducted at the location where the historic district boundary included the Reservoir shoreline (Figure 4A). Inspections were also performed at bank exposures<sup>1</sup> along the shoreline and at eroded areas. Five examples of erosion were observed during the survey (Figures 4A, 4B).

The boat used for the survey was provided and operated by the President of the Board of Directors of Friends of the Gile (FOG), Cathy Techtmann, and her husband. Both have property on the Reservoir and were insightful and informed guides.

#### BACKGROUND

Northern States Power Company - Wisconsin (NSPW) owns and maintains the Gile Flowage Storage Reservoir as well as the two downstream hydroelectric facilities, Saxon Falls Hydro and Superior Falls Hydro. The Reservoir encompasses approximately 3,317 acres and features approximately 26 miles of irregular shaped shoreline with many areas of exposed bedrock. "About 90% of the shoreline is in public or NSPW ownership and is maintained in a natural forested state, reducing the likelihood of erosion" (PAD 2020: 26). "The combination of NSPW shoreline ownership, existing native riparian

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<sup>1</sup> Bank exposures are any area where the bare face of some part of the bank can be viewed for artifacts: an exposed area does not constitute erosion.

vegetation buffers, and local shoreland regulations, work together to provide adequate protection from wide-spread shoreline erosion and over development” (PAD 2020: 26).

The Project is undergoing the process to obtain an original license from the Federal Energy Regulatory Commission (FERC or Commission). Since it has not been previously licensed, there is no Historic Resources Management Plan (HRMP), nor have there been any archaeological surveys of the shoreline. The 2022 shoreline monitoring survey is the first to be conducted at the Project.

The Commission is required to comply with Section 106 of the National Historic Preservation Act (NHPA). Compliance with the NHPA, as well as 36CRF800, requires an archaeological survey to determine whether cultural resource sites, which may be eligible for the National Register of Historic Places (NRHP), are affected by normal operation of the Project. Mead & Hunt, Inc., contracted with TRC to conduct the archaeological shoreline monitoring survey. The Area of Potential Effect (APE), as established through the 1993 Programmatic Agreement, is the project boundary as shown in Figure 1. This letter report provides the details of the research and fieldwork.

#### LITERATURE AND ARCHIVES RESEARCH

A TRC archaeologist reviewed the Wisconsin Historic Preservation Database (WHPD), which includes the Archaeological Site Inventory (ASI), Architecture and History Inventory (AHI), and Archaeological Reports Inventory (ARI); as well as the NRHP database, historic county atlases, historic US Geological Survey (USGS) 15-Minute and 7.5-Minute Topographic Quadrangles, and other sources deemed appropriate or likely to yield information relevant to cultural resources. The research noted one cultural resource and a trail that are overlapped by the Reservoir.

#### **Montreal Company Location Historic District**

The Montreal Company Location Historic District (MCLHD) was listed on the NRHP (NRHP #80000141) on May 23, 1980 (Figures 1, 2, 4A). Mining in the Lake Superior region began in the early 1840s when copper and iron ore were first discovered. The MCLHD is listed on the NRHP because it is an excellent example of a planned industrial community. Community planning was done for the mining companies to ensure housing for the company employees in the isolated areas where these mines were located. The MCLHD includes 116 contributing buildings, as well as the No. 5 mine shaft area, waste rock piles, City Hall, the Roosevelt School, Firehall building, Hamilton Club building, garage, engine house, and shops.

The first miners to the area settled around the mine shaft and built homes on lands leased from the mining company. Streets and houses were placed haphazardly across the landscape. Between 1907-1917, the planned community was built with 50 precut Aladdin Bungalows (NRHP Inventory – Nomination Form 1980).

### **Flambeau Trail**

The 1861 General Land Office (GLO) plat map noted the route of a trail running northwest to southeast through what is now the Gile Reservoir (Figure 3). Called the Flambeau Trail, it ran 90-miles from Madeline Island to Lac du Flambeau. The first part of the trail was a combination of river and water portages connected by trails on dry land. The 1863 GLO surveyor noted a crude bridge spanning the Montreal River along the trail constructed by fur traders. As the fur trade increased throughout Wisconsin, the trail became an important route for the transport of goods (Techtmann 1993).

### **FIELDWORK**

The survey was conducted on August 25 and 26, 2022 using a boat to gain access to shoreline areas that were adjacent to cultural resources or where there was sufficient bank exposure to warrant an inspection for artifacts. The survey consisted of a visual inspection of the Reservoir shoreline, including the islands. The boat was moored at the approximate location where the WHPD-mapped historic district overlaps the shore, the approximate areas where the Flambeau Trail is indicated on the GLO map, and at any area of erosion identified during the survey (Figures 4A, 4B; Table 1). Five areas of erosion were noted (E-1 through E-5 on Figures 4A and 4B and Photos 11-15). Area E-3 was within the WHPD-mapped MCLHD boundary. Ten additional photos were taken at various locations (Figure 2) to provide a visual characterization of the Reservoir's shoreline (Photos 1-10).<sup>2</sup> The inspection results are described below.

### **Montreal Company Location Historic District**

A small part of the WHPD-mapped MCLHD overlaps the Reservoir due west of the dam. This area is well vegetated with coniferous forest adjacent to the water. A small segment of this site shows erosion (E-3, Photo 13) and was surface collected at the water's edge, the exposed bank, and the slumped bank. No artifacts or archaeological deposits were noted. Since this area is within the WHPD-mapped MCLHD boundary, TRC recommends that this segment be monitored locally (e.g., NSPW operator) to determine if the exposure gets larger.

### **Flambeau Trail**

The GLO-mapped trail runs northwest-southeast and crosses an area below the Reservoir. The trail abuts the shoreline of the reservoir at two approximate locations (Figure 3). The shorelines at both locations are stable and well vegetated with pine, birch, maple, and oak. (Photo 2). No additional archaeological work is recommended at these locations.

### **E-1**

Erosion area E-1 is on the shoreline of a small island (Photo 11). The site was surface collected at the water's edge, the exposed bank, and the slumped bank. There were no artifacts or archaeological deposits encountered. No additional archaeological work is recommended at this location.

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<sup>2</sup> A total of 97 photos were taken at various areas along the shoreline; ten were selected for the report for descriptive purposes and five were selected to show erosion. The boat was moored at some of the locations to get a closer look at the shoreline.

#### **E-2**

Erosion area E-2 is on the west shoreline of the reservoir (Photo 12). The area was surface collected at the water's edge, the exposed bank, and the slumped bank. No artifacts or archaeological deposits were encountered. The toe of the bank in this location is stable and well vegetated. No additional archaeological work is recommended at this location.

#### **E-3**

Site E-3 is along the reservoir shoreline near the west end of the west dike (Photo 13). The area was surface collected; however, no artifacts or archaeological deposits were encountered. No additional archaeological work is recommended at this location.

#### **E-4**

Erosion was observed along the entire shoreline of the small island where E-4 is located (Photo 14). At normal pool elevation, the island would only be about 3 sq. meters in size. However, since the Reservoir elevation was down approximately 3 feet from normal pool at the time of the survey, a greater area of the island was exposed. The site was surface collected; however, no artifacts or archaeological deposits were encountered. No additional archaeological work is recommended at this location.

#### **E-5**

Erosion area E-5 is on the shoreline of a small island (Photo 15). The area was surface collected at water's edge, the exposed bank, and the slumped bank. No artifacts or archaeological deposits were encountered; therefore, no additional archaeological work is recommended at this location.

The remainder of the Reservoir's shoreline is well vegetated with stands of pine, birch, maple, and oak (Photos 1-10). Areas of exposed bedrock are visible along the shoreline at various locations as depicted in Photo 1 (right hand side) and Photo 10. The Reservoir elevation was three feet below normal pool so much of the exposed lake bottom revealed rock, gravel, or sand beaches where grasses had begun to grow on the newly exposed ground. There were a few areas of emergent vegetation, but most of the shoreline was forested to water's edge. No areas of rip rap or stabilization were noted.

### **CONCLUSION AND RECOMMENDATION**

The literature and archives research revealed that one cultural resource and one GLO-mapped trail were overlapped by the water. Five areas of erosion (E-1 through E-5) were also noted.

The single cultural resource site is designated as the Montreal Company Location Historic District. Most of the MCLHD shoreline is stable except for a small area designated as E-3. TRC recommends that NSPW monitor the erosion at site E-3 for any changes within 5 years of license issuance.

The trail noted on the 1861 GLO maps abuts the shoreline at two locations. The shoreline appears stable at these two locations and no additional archaeological work is recommended at this time.

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Erosion areas E-1, E-2, E-4, and E-5 were surface collected; however, no artifacts or archaeological deposits were encountered. No additional work is recommended at these locations.

Should NSPW personnel identify or become aware of erosion at any of the known archaeological sites, or become aware of substantial erosion at any area previously not documented, they should consult with an archaeologist and the State Historic Preservation Office (SHPO) on how best to proceed. If I can provide additional assistance, I can be reached by email at [AVanDyke@trcscompanies.com](mailto:AVanDyke@trcscompanies.com), or by phone at 262-225-5105.

Sincerely,  
TRC



Allen P. Van Dyke  
Principal Archaeologist – Midwest

Attachments: 4 Figures, 15 Photos, 1 Table

#### REFERENCES CITED

##### NRHP Inventory – Nomination Form

1980 Montreal Company Location Historic District - NRHP Inventory – Nomination Form. MS on file at the Wisconsin Historic Society. Madison, Wisconsin.

##### Techtmann, Cathy

1995 *Flambeau Trek Guide to the Historic Flambeau Trail*. Published by Cathy Techtmann, Iron County, UW-Extension.

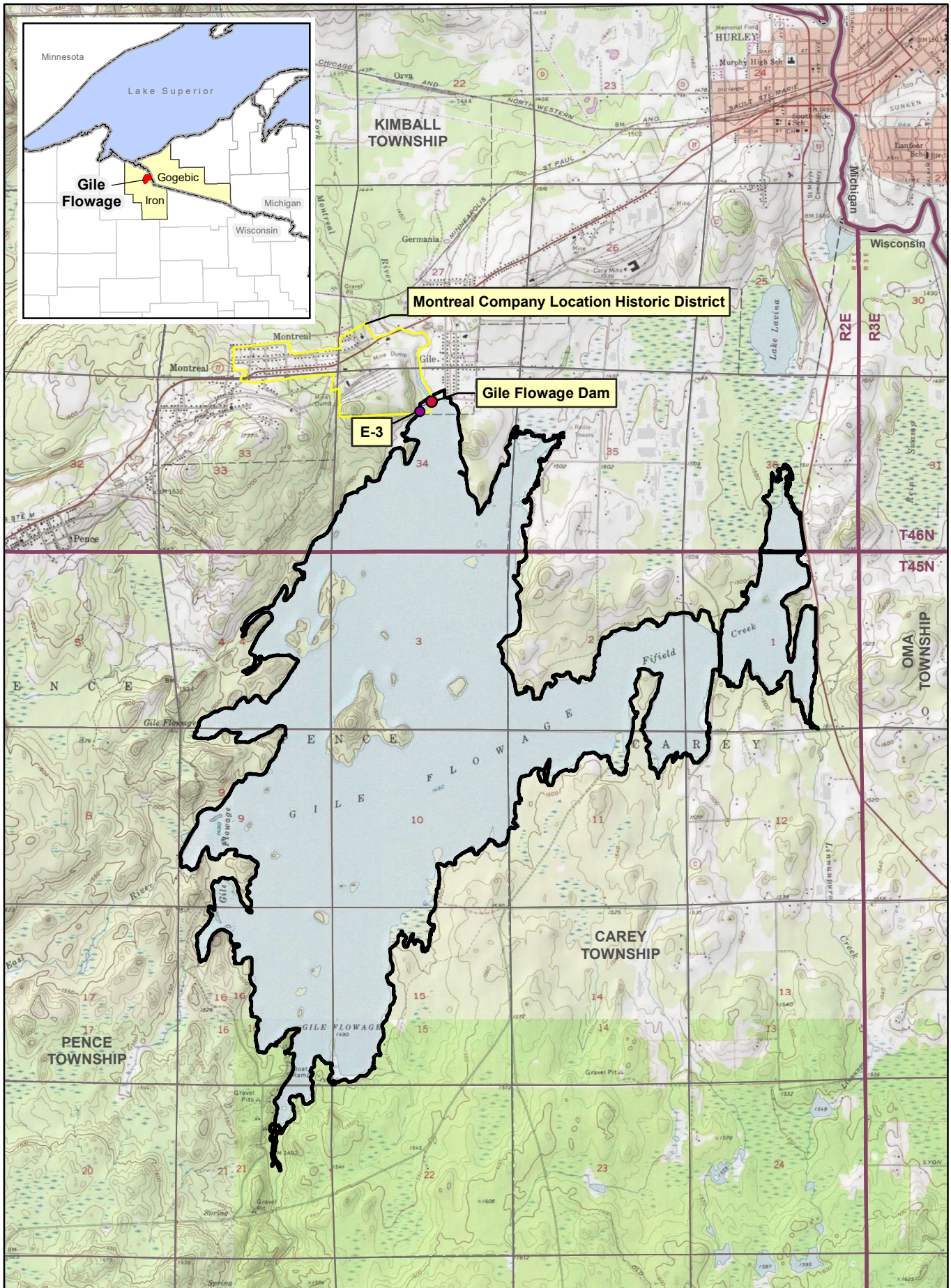
##### Mead & Hunt

2020 Preliminary Application Document. Gile Flowage Storage Reservoir Project FERC Docket No. UL20-1-000. Montreal River, Iron County, Wisconsin. Submitted by Northern States Power Company – Wisconsin, Eau Claire, Wisconsin

Xcel Energy's FERC Licensing Documentation is available at: [hydrolicensing.com/gile-flowage/](https://hydrolicensing.com/gile-flowage/)

**ATTACHMENT 1: FIGURES**



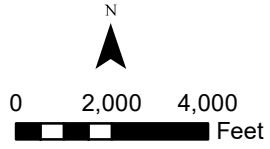


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Service Layer Credits: Iron County, WI, Wisconsin DNR, Michigan GIS Open Data

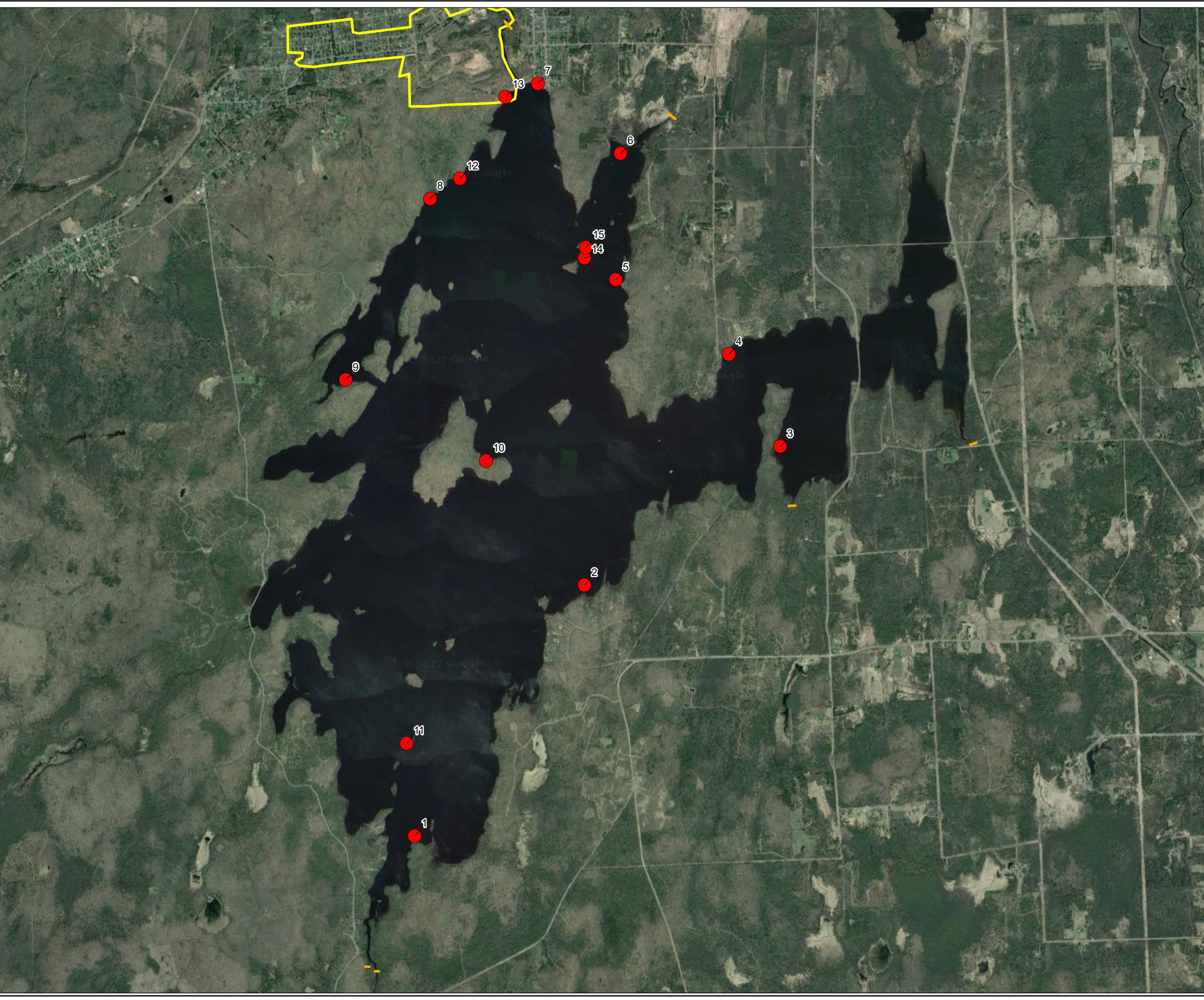


- Facility Boundary
- State Boundary
- Township Range
- Section






**Figure 1**  
**Gile Flowage Facility Boundary**  
**WI Dam ID 42**






**Legend:**

-  Upstream/Downstream Extent of Survey
-  Historic District
-  Photo Locations


Notes:  
1. Base Imagery from Google Earth Pro & Partners, 2022.

N



0      1700      3400      5100      6800  
Feet

1" = 2,500'  
1:30,000

<b>PROJECT:</b>		<b>Xcel Energy Gile Flowage Archaeological Survey Iron County, WI</b>	
<b>TITLE:</b>		<b>Erosion Locations Map</b>	
DRAWN BY:	A.MCMAHON	PROJ NO.:	486101.0000.0000
CHECKED BY:	R.KLABACKA-WILLIAMS	<b>FIGURE 2</b>	
APPROVED BY:	A.VAN DYKE		
DATE:	SEPTEMBER 2022		
		6737 W WASHINGTON ST. SUITE 2100 WEST ALLIS, WI 53214 PHONE: 262.879.1212	
FILE NO.:		[rpt]_Figx_[Gile Flowage]\Version 2_11x17.mxd	

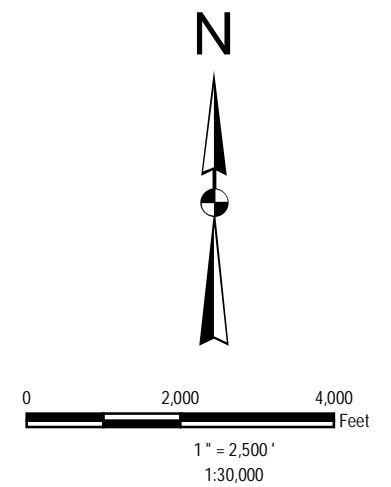


**Legend:**

- Project Area
- Historic District

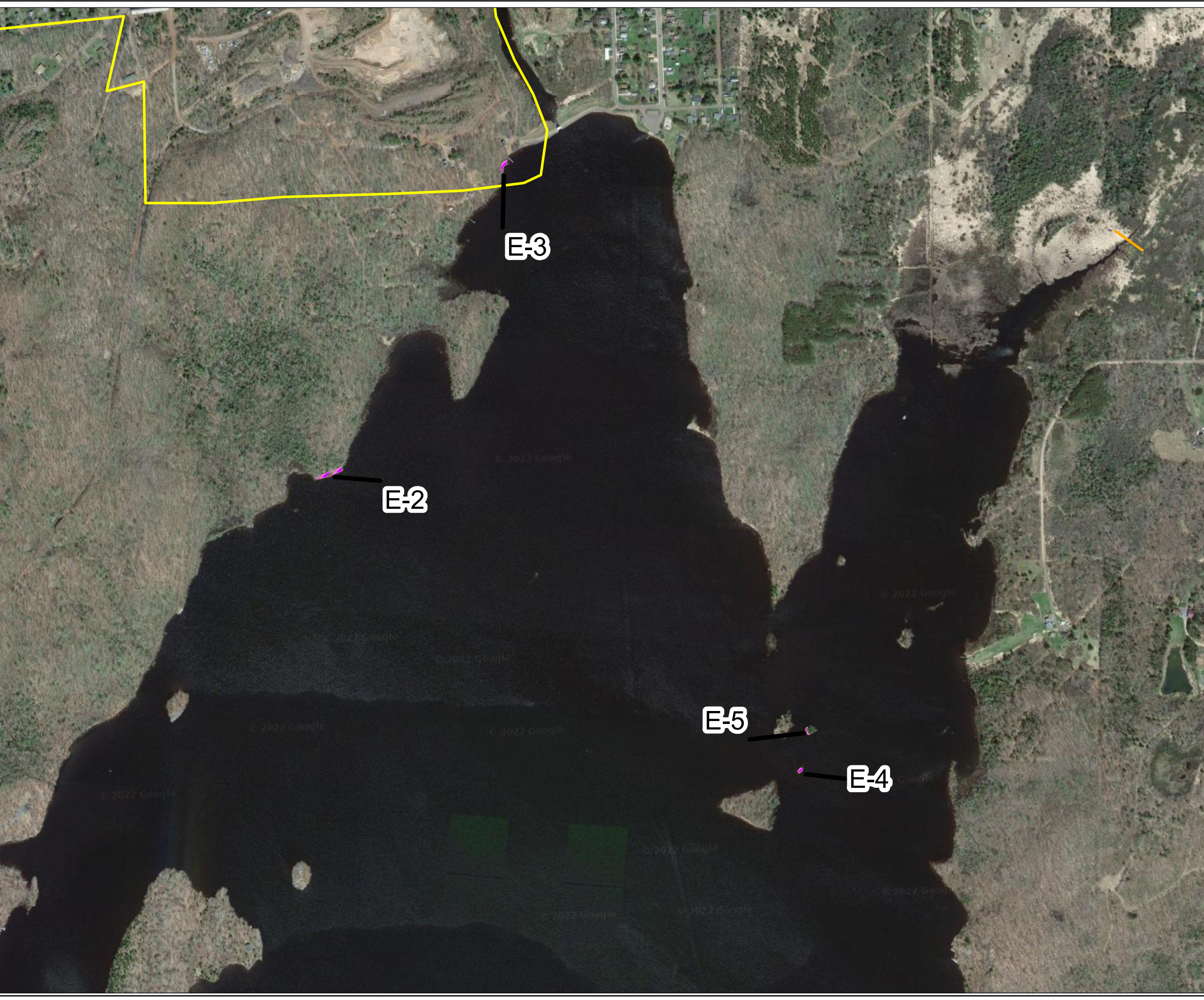
**Notes:**

1. Imagery from U.S. Department of the Interior-Bureau of Land Management.






PROJECT:		<b>Xcel Energy Gile Flowage Archaeological Survey Iron County, WI</b>	
TITLE:		<b>1863 GLO</b>	
DRAWN BY:	A.MCMAHON	PROJ NO.:	486101.0000.0000
CHECKED BY:	R.KLABACKA-WILLIAMS	<b>FIGURE 3</b>	
APPROVED BY:	A.VAN DYKE		
DATE:	SEPTEMBER 2022		
		6737 W WASHINGTON ST. SUITE 2100 WEST ALLIS, WI 53214 PHONE: 262.879.1212	
FILE NO.:	[rpt]_Figx_[project name]_TEMPLATE_11x17.mxd		

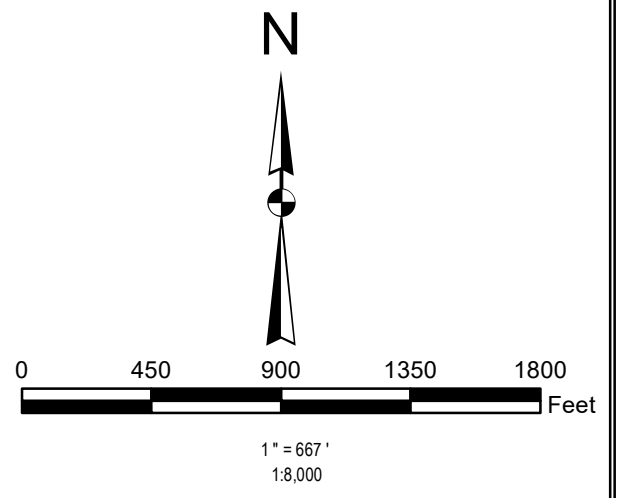
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 Coordinate System: NAD 1983 UTM Zone 15N (Meter)  
 Map Rotation: 0  
 TRC - GIS




**Legend:**

-  Upstream/Downstream Extent of Survey
-  Historic District
-  Erosion Areas



**Notes:**  
 1. Base Imagery from Google Earth Pro & Partners, 2022.



PROJECT:		<b>Xcel Energy Gile Flowage Archaeological Survey Iron County, WI</b>	
TITLE:		<b>Erosion Locations Map</b>	
DRAWN BY:	A.MCMAHON	PROJ NO.:	486101.0000.000
CHECKED BY:	R.KLABACKA-WILLIAMS	<b>FIGURE 4A</b>	
APPROVED BY:	A.VAN DYKE		
DATE:	SEPTEMBER 2022		
		6737 W WASHINGTON ST. SUITE 2100 WEST ALLIS, WI 53214 PHONE: 262.879.1212	
FILE NO.:		[rpt]_Figx_[project name]_TEMPLATE_11x17.mxd	

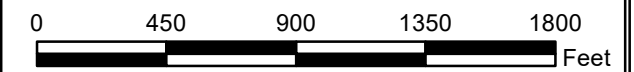


**Legend:**


-  Upstream/Downstream Extent of Survey
-  Erosion Areas

**Notes:**

1. Base Imagery from Google Earth Pro & Partners, 2022.



1" = 667'  
1:8,000

PROJECT:		<b>Xcel Energy Gile Flowage Archaeological Survey Iron County, WI</b>	
TITLE:		<b>Erosion Locations Map</b>	
DRAWN BY:	A.MCMAHON	PROJ NO.:	486101.0000.0000
CHECKED BY:	R.KLABACKA-WILLIAMS	<b>FIGURE 4B</b>	
APPROVED BY:	A.VAN DYKE		
DATE:	SEPTEMBER 2022		
		6737 W WASHINGTON ST. SUITE 2100 WEST ALLIS, WI 53214 PHONE: 262.879.1212	
FILE NO.:		[rpt]_Figx_[project name]_TEMPLATE_11x17.mxd	

**ATTACHMENT 2: PHOTOS**





**Photo 1: Coniferous forest – view to south.**



**Photo 2: Riparian meadow; background – coniferous forest. View to south.**



**Photo 3: Emergent wetland vegetation; background – coniferous forest. View to west.**



**Photo 4: Shrub-carr; background – coniferous forest. View to north.**



**Photo 5: Foreground – mud/gravel bar; middle ground – emergent wetland vegetation; background – coniferous forest.  
View to east.**



**Photo 6: Left side – deep marsh; right side – shallow marsh; middle – mud flat; background – mixed deciduous/coniferous forest. View to northeast.**



**Photo 7: Unvegetated rip rap armored shoreline with beach-like foreground. View to southwest.**





**Photo 8: Mud flat along the shoreline under the canopy of mixed deciduous/coniferous forest. View to north.**



**Photo 9: Mud flat or sand bar with sparse emergent vegetation; background - mixed deciduous/coniferous forest. View to south.**



**Photo 10: Exposed rock shoreline; mixed deciduous/coniferous forest behind it. View to south.**



**Photo 11: E-1 Mixed deciduous/coniferous forest behind erosion. View to northeast.**



**Photo 12: Not a definable plant community - mix of woody and herbaceous plants starting to establish. View to northwest.**



*Photo 13:* Tail of a dog on beach – foreground; mixed deciduous/coniferous forest on top of eroded bank. View to the northwest.



**Photo 14: Mixed deciduous/coniferous forest on top of the eroded bank; willow growing in beach on the left. View to west.**



**Photo 15: Mixed deciduous/coniferous forest on top of eroded bank. View to northeast.**

### **ATTACHMENT 3: TABLE**

**Table 1. Erosion Area Locations**

<b>Erosion #</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Photo Numbers</b>
E-1	46°22'43.79"N	90°14'26.80"W	11
E-2	46°25'8.87"N	90°13'59.55"W	12
E-3	46°25'29.68"N	90°13'41.70"W	13
E-4	46°24'47.34"N	90°13'14.18"W	14
E-5	46°24'50.02"N	90°13'13.57"W	15



# ARCHAEOLOGICAL REPORTS INVENTORY FORM

WHS PROJECT # \_\_\_\_\_

COUNTY \_\_\_\_\_

AUTHORS: \_\_\_\_\_

REPORT TITLE: \_\_\_\_\_

DATE OF REPORT (MONTH AND YEAR): \_\_\_\_\_

SERIES/NUMBER: \_\_\_\_\_

PLACE OF PUBLICATION: \_\_\_\_\_

LOCATIONAL INFORMATION [LEGAL DESCRIPTION OF SURVEY AREA (T-R-S)]

\_\_\_\_\_

U.S.G.S. QUAD MAP(S): \_\_\_\_\_

SITE(S) INVESTIGATED: \_\_\_\_\_

ACRES INVESTIGATED: \_\_\_\_\_

AGENCY # \_\_\_\_\_

## INVESTIGATION TECHNIQUES COMPLETED (Check all that apply.)

- |                                                         |                                                      |                                                |
|---------------------------------------------------------|------------------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> Historical Research            | <input type="checkbox"/> Surface Survey              | <input type="checkbox"/> Geomorphology         |
| <input type="checkbox"/> Interview/Informant            | <input type="checkbox"/> Soil Core                   | <input type="checkbox"/> Underwater            |
| <input type="checkbox"/> Records/Background             | <input type="checkbox"/> Walk Over/Visual Inspection | <input type="checkbox"/> Avocational Survey    |
| <input type="checkbox"/> Literature Background Research | <input type="checkbox"/> Mechanical Stripping        | <input type="checkbox"/> Chance Encounter      |
| <input type="checkbox"/> Traditional Knowledge          | <input type="checkbox"/> Test Excavation/Phase II    | <input type="checkbox"/> Osteological Analysis |
| <input type="checkbox"/> Monitoring                     | <input type="checkbox"/> Major Excavation/Phase III  | <input type="checkbox"/> Faunal Analysis       |
| <input type="checkbox"/> Shovel Testing/Probing         | <input type="checkbox"/> Remote Sensing              | <input type="checkbox"/> Floral Analysis       |

ABSTRACT:

Included in report

Written in space below