



# Water Quality Monitoring Plan

## Line 5 Wisconsin Segment Relocation Project

Version: 1

Version Date: 9/6/2022

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**ATTACHMENTS**

Attachment A – Sample Location Table and Maps

## INTRODUCTION

Enbridge Energy, Limited Partnership (“Enbridge” or “Company”), submitted applications requesting permits from the Wisconsin Department of Natural Resources (“WDNR”) and the U.S. Army Corps of Engineers (“USACE”) to construct its Line 5 Wisconsin Segment Relocation Project (“Project”) in Ashland, Bayfield, Douglas and Iron Counties, Wisconsin. Enbridge’s existing Line 5 pipeline, a 645-mile interstate pipeline, became operational in 1953. It originates in Superior, Wisconsin, traverses northern Wisconsin, the Upper and Lower Peninsulas of Michigan, and terminates near Sarnia, Ontario, Canada. The Wisconsin portion of the existing Line 5 pipeline crosses Douglas, Bayfield, Ashland, and Iron Counties. Within Ashland County, the existing Line 5 crosses through approximately 12 miles of the Bad River Reservation (“Reservation”) of the Bad River Band of Lake Superior Chippewa Tribe (“Bad River Band”).

Enbridge’s Project will replace the existing Line 5 pipeline segment that traverses through the Reservation with a new, 30-inch outside diameter pipeline segment to be located entirely outside the Reservation. The new, 30-inch outside diameter pipeline segment will cross approximately 30.6 miles of Ashland County and 10.5 miles of Iron County. The Project would also utilize temporary construction workspace (pipe storage yard) in Douglas County, Wisconsin and would install a new mainline valve on the existing Line 5 pipeline as well as make minor modifications to the existing Ino Pump Station in Bayfield County, Wisconsin. The new pipeline will be constructed of high yield carbon steel pipe and be coated for corrosion resistance.

The Project will require installation of the pipeline segment across numerous waterbodies, including perennial, intermittent, and ephemeral waterbodies. The majority of the Project impacts as a result of construction activities will be temporary and short-term in nature, including a short term increase in suspended sediments during instream construction activities.

To minimize temporary impacts to water quality, Enbridge has committed to crossing all waterbodies that are flowing at the time of construction using a dry crossing technique (i.e., dam and pump or flume methods) or a trenchless method (i.e., horizontal directional drill or direct pipe). Enbridge proposes to use typical open cut (wet trench) construction techniques to cross waterbodies if the waterbody is dry or has no perceptible flow at the time of construction. For waterbodies with standing water, but no perceptible flow, Enbridge will install downstream sediment curtains to minimize the potential for migration of suspended sediments downstream. Equipment to complete dry-ditch crossings will be on-site as a contingency should stream flow begin during construction. Additionally, Enbridge will further avoid and minimize impacts on waterbodies and associated water quality by implementing the measures described in its Environmental Protection Plan (EPP). Enbridge’s EPP outlines construction-related environmental policies, procedures, and mitigation measures Enbridge developed for its pipeline construction projects based on their experience during construction. It meets or exceeds applicable federal, state, and local environmental protection and erosion control specifications, technical standards, and practices.

As described in Section 23.3 of the EPP, Enbridge would construct temporary dams for dry crossings using sandbags, inflatable dams, aqua-dams, sheet piling, and/or steel plates both upstream and downstream of the proposed trenchline to isolate the work area from the stream flow. The dams will extend across the entire streambed and will be built to a height to withstand the highest water levels

anticipated at the time of construction. Water will either be pumped around the isolated work zone or will be directed into flume pipes extending through the temporary dams and across the isolated area to maintain downstream flow throughout the construction process. Water within the isolated section of the crossing will be pumped into a filtering structure. The construction work area will remain isolated from stream flow throughout the stream crossing duration, minimizing the potential for downstream sedimentation or lowering of downstream water quality.

Enbridge will cross larger waterbodies proposed as a dry crossing technique under either normal or low flow conditions. Enbridge will delay initiating a crossing under high flow conditions. Enbridge proposes to cross smaller intermittent waterbodies with flowing water at the time of construction using similar methods as those described above.

For each waterbody crossing completed using either the open cut or dry crossing techniques, native spoil excavated from the trench will be placed on the bank above the high water mark for use as backfill material. A prefabricated segment of pipeline will be placed into the trench using side-boom tractors or similar placement equipment. Concrete coating, pipe sacks, or set-on weights will be used, as necessary, to provide negative buoyancy for the pipeline once placed in the trench. Once the trench is backfilled with native material, the banks will be restored as near as practicable to preconstruction contours and stabilized in accordance with Enbridge's EPP and applicable waterbody crossing permits. Stabilization measures will include seeding, installation of erosion control blankets, or installation of site-specific bank stabilization materials, as appropriate. Excavated material not required as backfill to reestablish the streambed profile or stream banks will be removed and disposed of at upland disposal sites. In each case and for each method, Enbridge will adhere to measures specified in Enbridge's EPP and additional requirements specified in waterbody crossing permits.

To minimize downstream transport of sediments, Enbridge will slowly remove the upstream dams, allowing water back into the previously isolated construction work area. Enbridge will then begin to remove the downstream dam. Enbridge will maintain downstream flow throughout the duration of the temporary dam removal process.

Instream trenching and backfilling will typically be complete within 24 hours or less on minor waterbodies (less than 10 feet wide) and 48 hours or less on intermediate (between 10 and 100 feet wide) or as directed by applicable permits. Use of dry crossing techniques will require additional time associated construction and removal of temporary dams.

## **1.0 WATER QUALITY**

Based on Enbridge's experience, the primary water quality parameter affected by pipeline construction is a temporary increase in total suspended solids (TSS). Installation of and removal of the temporary dam associated with a dry crossing technique, and the initial flush of water flowing through the instream work area following restoring the natural waterbody flow to the isolated segment of the waterbody channel can result in short term increases in TSS levels. The amount and duration of elevated TSS levels is dependent on the stream substrate composition and stream flow velocity, with fine materials (e.g., clay particles and organic material) generally staying in suspension longer than heavier substrate materials (e.g., sand). The elevated TSS levels generally return to background levels within a matter of hours once flow has been restored through the work zone.



To document water quality leading up to, during, and following the Project, Enbridge proposes to collect water quality samples prior to construction, during active construction, and following completion of construction.

## 2.0 PRECONSTRUCTION SAMPLING

The Project will cross 48 perennial waterbodies in total including: 10 perennial waterbodies crossed by temporary access roads; 29<sup>1</sup> waterbodies mainline pipeline installation; five waterbodies crossed only by HDD pipe assembly temporary workspace; and four perennial features within the temporary workspace, but not crossed by the pipeline (including three ponds).

Prior to construction Enbridge will collect baseline water quality data from perennial streams that will be crossed by the pipeline centerline during construction of the Project, as well as select intermittent streams (if water is present at the time of construction). Enbridge has identified the following 30 streams for preconstruction water quality sampling:

| Feature ID   | USGS Name               | MP    | Crossing Method | Flow Regime  | ORW /ERW* | Agency Classification                      |
|--|-------------------------|-------|-----------------|--------------|-----------|--|
| sase006p   | Bay City Creek          | 0.63  | DC              | Perennial    | --        | --   |
| sasb007i   | Beartrap Creek          | 2.91  | DC              | Intermittent | ORW       | --   |
| sasw023p   | White River             | 4.04  | HDD             | Perennial    | ERW       | Class II Trout, ASNRI-PNW                  |
| sasc041p   | Rock Creek              | 5.05  | DC              | Perennial    | --        | --   |
| sase022p   | Deer Creek              | 6.35  | HDD             | Perennial    | --        | --   |
| sasd011p   | UNT of Marengo River    | 7.99  | DC              | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| sase1020p  | Marengo River           | 11.40 | Direct Bore     | Perennial    | ORW       | Class III Trout, ASNRI-PNW                 |
| sasa1005p  | Brunswiler River        | 14.10 | HDD             | Perennial    | ORW       | Class III Trout, ASNRI-PNW                 |
| sasc1006p  | UNT of Brunswiler River | 14.73 | DC              | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| sasc1003p_x1   | UNT of Trout Brook      | 15.86 | DC              | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| sasc1012p  | Trout Brook             | 16.58 | HDD             | Perennial    | --        | Class III Trout, ASNRI-PNW                 |
| sasc1014p_x1   | UNT of Billy Creek      | 16.77 | HDD             | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| sasc022p   | Billy Creek             | 17.25 | HDD             | Perennial    | --        | Class I Trout, ASNRI-PNW                   |
| sasd1013p  | UNT of Silver Creek     | 19.09 | HDD             | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| sasd1011p_x3 +   | Silver Creek            | 19.20 | HDD             | Perennial    | --        | Class II Trout, ASNRI-PNW                  |
| sasd1015p  | UNT of Silver Creek     | 19.83 | DC              | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| sase005p_x2  | UNT of Silver Creek     | 20.61 | DC              | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| sasv004p   | UNT of Silver Creek     | 21.28 | DC              | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| sasv020p   | UNT of Krause Creek     | 22.01 | DC              | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| sasv019p   | Krause Creek            | 22.28 | HDD             | Perennial    | ERW       | Class I Trout, ASNRI-PNW                   |
| sasa008p   | UNT of Bad River        | 23.72 | DC              | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| sasb006p   | Bad River               | 24.18 | HDD             | Perennial    | ERW       | Class III Trout, ASNRI-PNW                 |
| sasa004p   | UNT of Gehman Creek     | 28.39 | DC              | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| sasw005  | Camp Four Creek         | 29.81 | DC              | Intermittent | --        | Class II Trout, ASNRI-PNW                  |
| sirb010p   | UNT of Feldcher Creek   | 30.67 | DC              | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| WDH-103  | Feldcher Creek          | 31.76 | DC              | Intermittent | --        | Class II Trout, ASNRI-PNW                  |
| sirb012p   | Tyler Forks             | 34.04 | HDD             | Perennial    | ORW       | Class II Trout, ASNRI-PNW                  |
| sird001p   | Potato River            | 37.86 | HDD             | Perennial    | ORW       | Class II Trout, ASNRI-PNW                  |
| sird009p   | UNT of Vaughn Creek     | 39.00 | DC              | Perennial    | --        | <i>Perennial tributary of trout stream</i> |
| sird016p   | Vaughn Creek            | 39.56 | HDD             | Perennial    | ERW       | Class II Trout, ASNRI-PNW                  |
| *ORW: outstanding resource water; ERW: exceptional resource water  |                         |       |                 |              |           |  |
| + Silver Creek is crossed three times by the Project; therefore, the most downstream crossing is included in this table. |                         |       |                 |              |           |  |

Enbridge will collect grab samples at the pipeline crossing location approximately 5 days prior to start of the stream crossing. Samples will be analyzed for dissolved oxygen (DO), pH, conductivity, temperature,

<sup>1</sup> The proposed Silver Creek HDD will drill beneath the waterbody three times. Enbridge proposes to collect water quality samples at the furthest downstream location.

chemical oxygen demand (COD), turbidity (field measurement) and total suspended solids (TSS). COD and TSS analysis will be completed by a certified laboratory using standard analytical methodologies. DO, pH, conductivity, and temperature measurements will be collected in the field using standard analytical methodologies.

Three of the 27 waterbodies are listed under Section 303(d) of the Clean Water Act as impaired:

- sase006p - Bay City Creek (total phosphorous);
- sasc1012p - Trout Brook (fecal coliform); and,
- sase1020p - Marengo River (fecal coliform).

The water quality parameters will include those described above as well as analysis for the respective impairment. Photographs will be taken (upstream, downstream, and across) to document physical conditions at each site.

### **3.0 ACTIVE CONSTRUCTION SAMPLING**

During instream construction, Enbridge will collect water quality samples for analysis of the same parameters within 100 feet upstream of the crossing. Enbridge will also collect water quality samples approximately 100 feet downstream of the crossing (or approximately 100 feet downstream of the discharge point where the dam and pump method is used) where Enbridge has secured landowner permission for off right-of-way access, or will access the sample site from the waterbody where safe stream conditions allow (i.e., depth). Samples will be collected daily throughout the duration of the instream work.

Enbridge will collect additional water quality samples at the first downstream public road crossing when:

- Field turbidity sample results (Nephelometric Turbidity Unit or NTU<sup>2</sup>) are greater than 5 NTUs over upstream level when the upstream levels are 50 NTUs or less; or,
- When the downstream NTU readings are greater than 10 percent above upstream NTU readings when the upstream readings are greater than 50 NTUs.

The table and maps provided in Attachment A describe the downstream sampling locations.

### **4.0 POST CONSTRUCTION SAMPLING**

Following completion of instream construction activities, Enbridge will complete streambank restoration/stabilization and restore natural stream flow through the construction workspace. Enbridge will then collect daily water quality samples for three additional days upstream of the crossing location and downstream of the crossing location at approximately the same locations as the active construction samples. Enbridge will collect additional samples at one-week post construction and one-month post construction.

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<sup>2</sup> A Nephelometric Turbidity Unit (NTU) is a measure of the opaqueness of a fluid due to the presence of suspended solids (inorganic or biological). The higher the concentration of suspended solids in the water, the higher the turbidity is and the dirtier it looks.

## **5.0 HORIZONTAL DIRECTIONAL DRILLS AND DIRECT PIPE CROSSINGS**

In the event of an in-stream inadvertent return, Enbridge will collect water samples upstream of the crossing location and 100 feet downstream of the inadvertent return location where Enbridge has secured landowner permission for off right-of-way access. Additionally, Enbridge will collect water samples at each public road crossing downstream of the instream inadvertent return location to the exterior boundary of the Bad River Reservation. Samples will be collected from the stream bank where public rights-of-way allow, or will be collected from the respective bridge. Enbridge notes that changes in downstream water quality may be due to inputs from tributaries where the confluence of the tributary and the primary waterbody being sampled occurs upstream of the sampling location.

Enbridge will notify the Bad River Band of Lake Superior Chippewa (“Bad River Band”) of an in-stream inadvertent return and will work with the Bad River Band to obtain permission to collect additional water samples within the Reservation boundary at public road crossing locations. Samples will be collected every six hours from each location following discovery of an instream inadvertent return. Once the in-stream inadvertent return has been successfully stopped and/or contained, water quality samples will be collected from each location daily for an additional five days at each sampling location described above. Collected samples will be analyzed for DO, pH, conductivity, temperature, COD, turbidity (field measurement), and TSS.

## **6.0 REPORTING**

Following completion of the Project, Enbridge will submit a final report to the USACE and WDNR providing the water quality sampling procedures and associated results.



# **Water Quality Monitoring Plan**

**Line 5 Wisconsin Segment Relocation Project**

**Attachment A**

# Enbridge Line 5 Wisconsin Segment Relocation Project

## Water Quality Sampling Plan

### Sample Site Information

| Map Page | Milepost | Waterbody Unique ID | Waterbody Name           | Distance to Tract Boundary (feet) | Distance to Downstream Public Road (feet) | Distance to Downstream Public Road (miles) | Downstream Public Road Name | Notes                |
|----------|----------|---------------------|--------------------------|-----------------------------------|---|--|-----------------------------|----------------------|
| 1        | 0.63     | sase006p            | Bay City Creek           | 726                               | 4,334                                     | 0.82                                       | Beaser Road                 |                      |
| 2        | 2.91     | sasb007i            | Beartrap Creek           | 1279                              | 3,436                                     | 0.65                                       | Hagstrom Road               |                      |
| 3        | 4.04     | sasw023p            | White River              | 453                               | 27,396                                    | 5.19                                       | State Highway 13            |                      |
| 4        | 5.05     | sasc041p            | Rock Creek               | 945                               | 25,244                                    | 4.78                                       | State Highway 13            |                      |
| 5        | 6.35     | sase022p            | Deer Creek               | 389                               | 28,576                                    | 5.41                                       | State Highway 13            |                      |
| 6        | 7.99     | sasd011p            | UNT of Marengo River     | 240                               | 5,469                                     | 1.04                                       | State Highway 112           |                      |
| 7        | 11.40    | sase1020p           | Marengo River            | 756                               | 756                                       | 0.14                                       | River Road                  |                      |
| 8        | 14.10    | sasa1005p           | Brunsweller River        | 852                               | 852                                       | 0.16                                       | County Road C               |                      |
| 9        | 14.73    | sasc1006p           | UNT of Brunsweller River | 1,301                             | 1,811                                     | 0.34                                       | State Highway 13            |                      |
| 10       | 15.85    | sasc1003p_x1        | UNT of Trout Brook       | 1,603                             | 4,646                                     | 0.88                                       | County Road C               |                      |
| 11       | 16.58    | sasc1012p           | Trout Brook              | 570                               | 644                                       | 0.12                                       | State Highway 13            |                      |
| 12       | 17.25    | sasc022p            | Billy Creek              | 132                               | 152                                       | 0.04                                       | State Highway 13            |                      |
| 13       | 19.09    | sasd1011p_x1        | Silver Creek             | 837                               | 4,926                                     | 0.93                                       | State Highway 13            |                      |
| 13       | 19.14    | sasd1011p_x2        | Silver Creek             | 1,103                             | 5,192                                     | 0.98                                       | State Highway 13            |                      |
| 13       | 19.20    | sasd1011p_x3        | Silver Creek             | 1,557                             | 5,646                                     | 1.07                                       | State Highway 13            |                      |
| 14       | 19.83    | sasd1015p           | UNT of Silver Creek      | 1,340                             | 11,142                                    | 2.11                                       | State Highway 13            |                      |
| 15       | 20.61    | sase005p_x2         | UNT of Silver Creek      | 642                               | 21,103                                    | 4.00                                       | State Highway 13            |                      |
| 16       | 21.28    | sasv004p            | UNT of Silver Creek      | 1,886                             | 23,300                                    | 4.41                                       | State Highway 13            |                      |
| 17       | 22.01    | sasv020p            | UNT of Krause Creek      | 1,738                             | 1,738                                     | 0.33                                       | County Road C               |                      |
| 18       | 22.28    | sasv019p            | Krause Creek             | 506                               | 2,306                                     | 0.44                                       | County Road C               |                      |
| 19       | 23.72    | sasa008p            | UNT of Bad River         | 897                               | 1,027                                     | 0.19                                       | State Highway 13            |                      |
| 20       | 24.18    | sasb006p            | Bad River                | 1,893                             | 65,600                                    | 12.42                                      | --                          | Reservation Boundary |
| 21       | 28.39    | sasa004p            | UNT of Gehrman Creek     | 701                               | 1,740                                     | 0.33                                       | Popko Road                  |                      |
| 22       | 29.81    | sasw005             | Camp Four Creek          | 987                               | 5,001                                     | 0.95                                       | Fisher Road                 |                      |
| 23       | 30.67    | sirb010p            | UNT of Feldcher Creek    | 1,094                             | 9,593                                     | 1.82                                       | State Highway 169           |                      |
| 24       | 31.76    | WDH-103             | Feldcher Creek           | 1,926                             | 8,001                                     | 1.52                                       | State Highway 169           |                      |
| 25       | 34.04    | sirb012p            | Tyler Forks              | 7,151                             | 15,956                                    | 3.02                                       | --                          | Reservation Boundary |
| 26       | 37.86    | sird001p            | Potato River             | 271                               | 8,814                                     | 1.67                                       | State Highway 169           |                      |
| 27       | 39.01    | sird009p            | UNT of Vaughn Creek      | 790                               | 8,637                                     | 1.64                                       | State Highway 169           |                      |
| 28       | 39.56    | sird016p            | Vaughn Creek             | 388                               | 8,075                                     | 1.53                                       | State Highway 169           |                      |





1:3,000

- |                              |                       |                          |
|------------------------------|-----------------------|--------------------------|
| ● Milepost                   | ★ Waterbody Crossing  | □ Pond                   |
| — Existing Enbridge Pipeline | ↔ Public Access Point | ■ Perennial Waterbody    |
| - - - Proposed Centerline    | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Proposed Workspace         | — Additional Sources  | ■ Ephemeral Waterbody    |
| ■ Public Land                |                       |                          |
| □ Parcel Boundary            |                       |                          |

Total River Miles to Crossing:  
0.82



**Site: Bay City Creek (sase006p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







1:2,500

- |                           |                       |                          |
|---------------------------|-----------------------|--------------------------|
| ● Milepost                | ✱ Waterbody Crossing  | ■ Pond                   |
| - - - Proposed Centerline | ↔ Public Access Point | ■ Perennial Waterbody    |
| ■ Proposed Workspace      | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land             | — Additional Sources  | ■ Ephemeral Waterbody    |
| □ Parcel Boundary         |                       |                          |

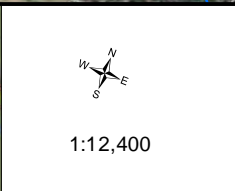
Total River Miles to Crossing:  
0.65



**Site: Beartrap Creek (sasb007i)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







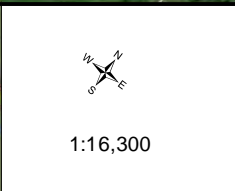
|                     |                     |                        |
|---------------------|---------------------|------------------------|
| Milepost            | Waterbody Crossing  | Pond                   |
| Proposed Centerline | Public Access Point | Perennial Waterbody    |
| Proposed Workspace  | AOI Stream          | Intermittent Waterbody |
| Public Land         | Additional Sources  | Ephemeral Waterbody    |
| Parcel Boundary     |                     |                        |

Total River Miles to Crossing:  
5.19

**Site: White River (sasw023p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.

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|                     |                     |                        |
|---------------------|---------------------|------------------------|
| Milepost            | Waterbody Crossing  | Pond                   |
| Proposed Centerline | Public Access Point | Perennial Waterbody    |
| Proposed Workspace  | AOI Stream          | Intermittent Waterbody |
| Public Land         | Additional Sources  | Ephemeral Waterbody    |
| Parcel Boundary     |                     |                        |

Total River Miles to Crossing:  
4.78

**Site: Rock Creek (sasc041p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.

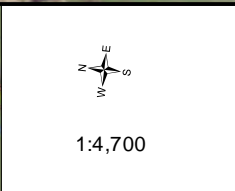
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DRAWN BY: MBowen









|                     |                     |                        |
|---------------------|---------------------|------------------------|
| Milepost            | Waterbody Crossing  | Pond                   |
| Proposed Centerline | Public Access Point | Perennial Waterbody    |
| Proposed Workspace  | AOI Stream          | Intermittent Waterbody |
| Public Land         | Additional Sources  | Ephemeral Waterbody    |
| Parcel Boundary     |                     |                        |

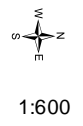
Total River Miles to Crossing: 1.04

**Site: UNT of Marengo River (sasd011p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.

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DRAWN BY: MBowen





- |                           |                       |                          |
|---------------------------|-----------------------|--------------------------|
| ● Milepost                | ✱ WaterbodyCrossing   | ■ Pond                   |
| - - - Proposed Centerline | ↔ Public Access Point | ■ Perennial Waterbody    |
| ■ Proposed Workspace      | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land             | — Additional Sources  | ■ Ephemeral Waterbody    |
| □ Parcel Boundary         |                       |                          |

Total River Miles to Crossing:  
0.14



**Site: Marengo River (sase1020p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







This information is for environmental review purposes only.



1:600

- |                         |                        |                          |
|-------------------------|------------------------|--------------------------|
| ● Milepost              | ★ Waterbody Crossing   | □ Pond                   |
| --- Proposed Centerline | ↔ Public Access Point  | ■ Perennial Waterbody    |
| --- Proposed Workspace  | --- AOI Stream         | ■ Intermittent Waterbody |
| ■ Public Land           | --- Additional Sources | ■ Ephemeral Waterbody    |
| □ Parcel Boundary       |                        |                          |

Total River Miles to Crossing:  
0.16



**Site: Brunsweler River (sasa1005p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







1:1,200

- |                           |                       |                          |
|---------------------------|-----------------------|--------------------------|
| ● Milepost                | ★ Waterbody Crossing  | ■ Pond                   |
| - - - Proposed Centerline | ↔ Public Access Point | ■ Perennial Waterbody    |
| ■ Proposed Workspace      | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land             | — Additional Sources  | ■ Ephemeral Waterbody    |
| □ Parcel Boundary         |                       |                          |

Total River Miles to Crossing:  
0.34



**Site: UNT of Brunsweler River (sasc1006p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







1:3,100

- |                           |                       |                          |
|---------------------------|-----------------------|--------------------------|
| ● Milepost                | ★ Waterbody Crossing  | ■ Pond                   |
| - - - Proposed Centerline | ↔ Public Access Point | ■ Perennial Waterbody    |
| ■ Proposed Workspace      | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land             | — Additional Sources  | ■ Ephemeral Waterbody    |
| □ Parcel Boundary         |                       |                          |

Total River Miles to Crossing:  
0.88



**Site: UNT of Trout Brook (sasc1003p\_x1)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







1:500

- |                           |                       |                          |
|---------------------------|-----------------------|--------------------------|
| ● Milepost                | ✱ WaterbodyCrossing   | ■ Pond                   |
| - - - Proposed Centerline | ↔ Public Access Point | ■ Perennial Waterbody    |
| ■ Proposed Workspace      | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land             | — Additional Sources  | ■ Ephemeral Waterbody    |
| □ Parcel Boundary         |                       |                          |

Total River Miles to Crossing:  
0.12



**Site: Trout Brook (sasc1012p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







This information is for environmental review purposes only.



1:200

- |                           |                       |                          |
|---------------------------|-----------------------|--------------------------|
| ● Milepost                | ★ Waterbody Crossing  | □ Pond                   |
| - - - Proposed Centerline | ↔ Public Access Point | ■ Perennial Waterbody    |
| - - - Proposed Workspace  | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land             | — Additional Sources  | □ Ephemeral Waterbody    |
| □ Parcel Boundary         |                       |                          |

Total River Miles to Crossing:  
0.04



**Site: Billy Creek (sasc022p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







1:3,300

- |                         |                        |                          |
|-------------------------|------------------------|--------------------------|
| ● Milepost              | ✱ Waterbody Crossing   | ■ Pond                   |
| --- Proposed Centerline | ↔ Public Access Point  | ■ Perennial Waterbody    |
| --- Proposed Workspace  | --- AOI Stream         | ■ Intermittent Waterbody |
| ■ Public Land           | --- Additional Sources | ■ Ephemeral Waterbody    |
| □ Parcel Boundary       |                        |                          |

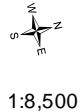
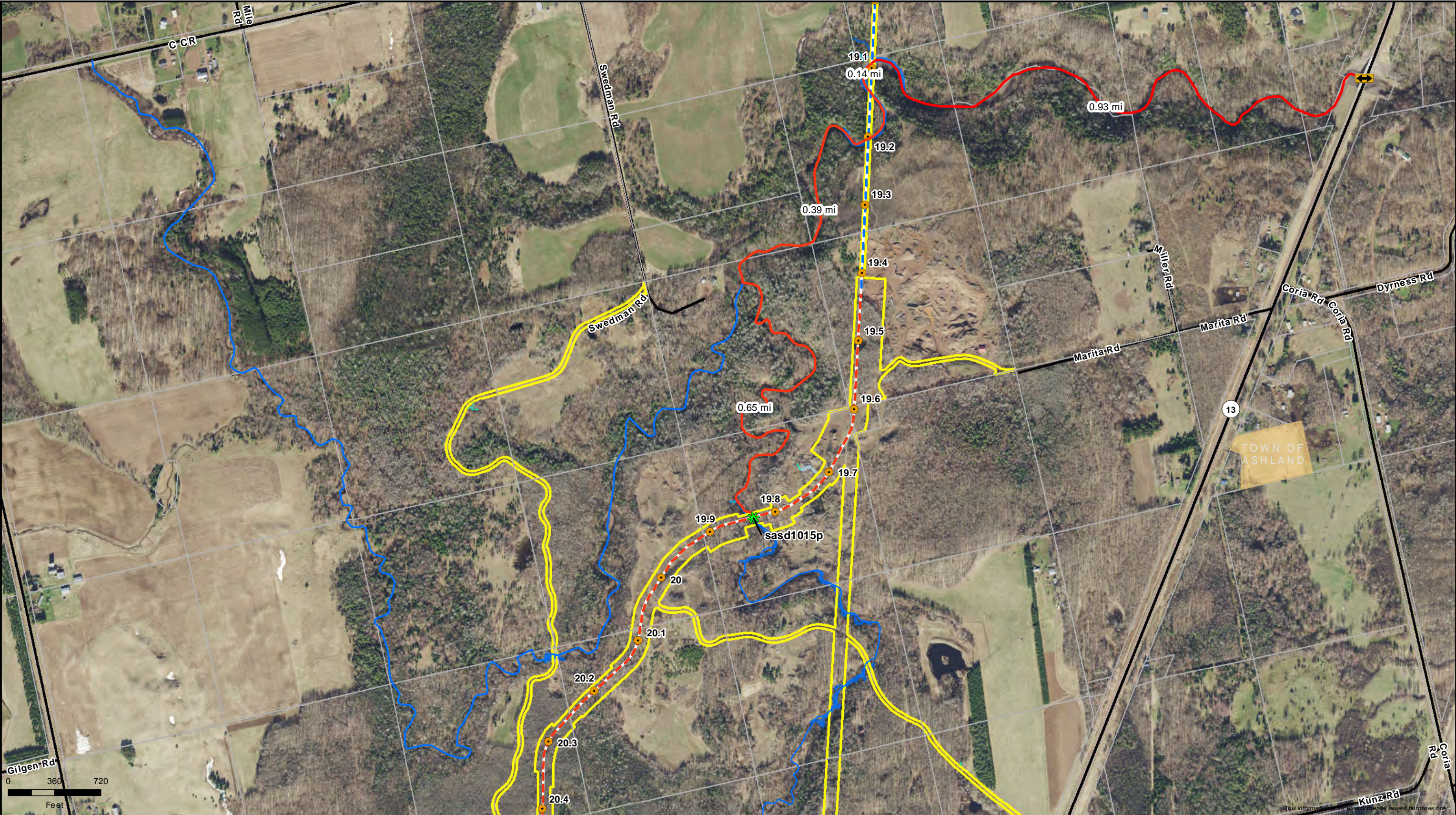
Total River Miles to Crossing:  
0.93



**Site: Silver Creek (sasd1011p\_x1)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







- |                         |                        |                          |
|-------------------------|------------------------|--------------------------|
| ● Milepost              | ★ Waterbody Crossing   | ■ Pond                   |
| --- Proposed Centerline | ➡ Public Access Point  | ■ Perennial Waterbody    |
| ■ Proposed Workspace    | --- AOI Stream         | ■ Intermittent Waterbody |
| ■ Public Land           | --- Additional Sources | ■ Ephemeral Waterbody    |
| □ Parcel Boundary       |                        |                          |

Total River Miles to Crossing:  
2.11



**Site: UNT of Silver Creek (sasd1015p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







1:8,400

- |                         |                       |                          |
|-------------------------|-----------------------|--------------------------|
| ● Milepost              | ★ Waterbody Crossing  | ■ Pond                   |
| --- Proposed Centerline | ➡ Public Access Point | ■ Perennial Waterbody    |
| ■ Proposed Workspace    | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land           | — Additional Sources  | ■ Ephemeral Waterbody    |
| ■ Parcel Boundary       |                       |                          |

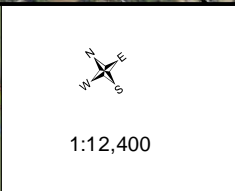
Total River Miles to Crossing:  
4



**Site: UNT of Silver Creek (sase005p\_x2)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.









|                     |                     |                        |
|---------------------|---------------------|------------------------|
| Milepost            | Waterbody Crossing  | Pond                   |
| Proposed Centerline | Public Access Point | Perennial Waterbody    |
| Proposed Workspace  | AOI Stream          | Intermittent Waterbody |
| Public Land         | Additional Sources  | Ephemeral Waterbody    |
| Parcel Boundary     |                     |                        |

**Site: UNT of Silver Creek (sasv004p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.



Total River Miles to Crossing:  
4.41

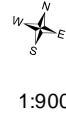
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DRAWN BY: MBowen





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1:900

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|---------------------------|-----------------------|--------------------------|
| ● Milepost                | ★ Waterbody Crossing  | ■ Pond                   |
| - - - Proposed Centerline | ↔ Public Access Point | ■ Perennial Waterbody    |
| ■ Proposed Workspace      | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land             | — Additional Sources  | ■ Ephemeral Waterbody    |
| □ Parcel Boundary         |                       |                          |

Total River Miles to Crossing:  
0.33



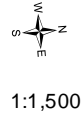
**Site: UNT of Krause Creek (sasv020p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







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|-------------------------|-----------------------|--------------------------|
| ● Milepost              | ✱ Waterbody Crossing  | ■ Pond                   |
| --- Proposed Centerline | ↔ Public Access Point | ■ Perennial Waterbody    |
| ■ Proposed Workspace    | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land           | — Additional Sources  | ■ Ephemeral Waterbody    |
| □ Parcel Boundary       |                       |                          |

Total River Miles to Crossing:  
0.44



**Site: Krause Creek (sasv019p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







1:900

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|---------------------------|-----------------------|--------------------------|
| ● Milepost                | ★ Waterbody Crossing  | □ Pond                   |
| - - - Proposed Centerline | ↔ Public Access Point | ■ Perennial Waterbody    |
| ▭ Proposed Workspace      | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land             | — Additional Sources  | □ Ephemeral Waterbody    |
| ▭ Parcel Boundary         |                       |                          |

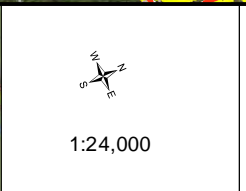
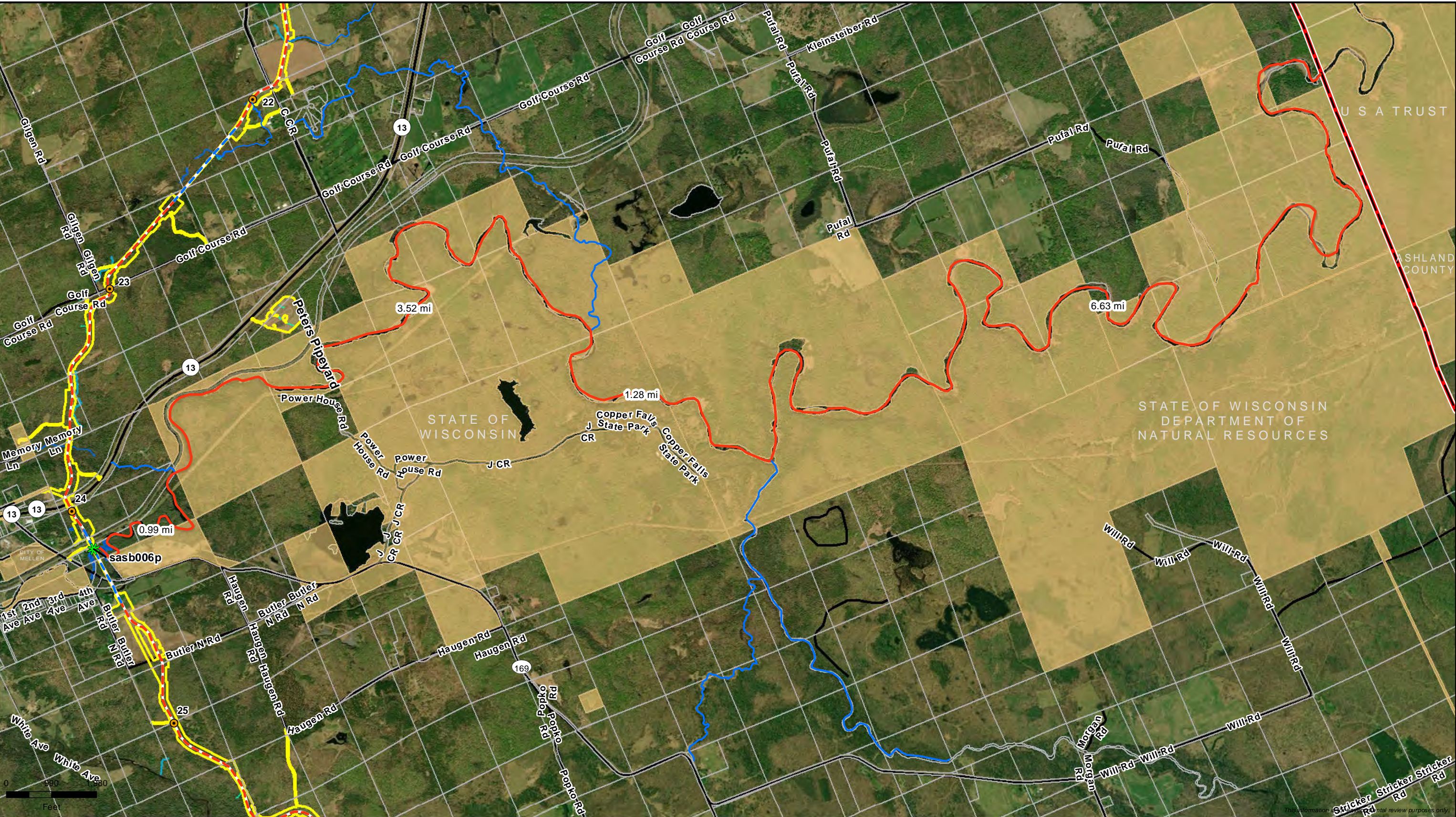
Total River Miles to Crossing:  
0.19



**Site: UNT of Bad River (sasa008p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







|                     |                     |                     |                        |
|---------------------|---------------------|---------------------|------------------------|
| Milepost            | Waterbody Crossing  | Pond                | Reservation Boundary   |
| Proposed Centerline | Proposed Workspace  | Perennial Waterbody | Intermittent Waterbody |
| Public Land         | Additional Sources  | Ephemeral Waterbody |                        |
| Parcel Boundary     | Public Access Point |                     |                        |
| AOI Stream          |                     |                     |                        |

Total River Miles to Crossing:  
12.42

**Site: Bad River (sasb006p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.

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1:1,300

- |                     |                     |                        |
|---------------------|---------------------|------------------------|
| Milepost            | Waterbody Crossing  | Pond                   |
| Proposed Centerline | Public Access Point | Perennial Waterbody    |
| Proposed Workspace  | AOI Stream          | Intermittent Waterbody |
| Public Land         | Additional Sources  | Ephemeral Waterbody    |
| Parcel Boundary     |                     |                        |

Total River Miles to Crossing:  
0.33



**Site: UNT of Gehrman Creek (sasa004p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







1:2,700

- |                           |                       |                          |
|---------------------------|-----------------------|--------------------------|
| ● Milepost                | ★ Waterbody Crossing  | ■ Pond                   |
| - - - Proposed Centerline | ↔ Public Access Point | ■ Perennial Waterbody    |
| ■ Proposed Workspace      | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land             | — Additional Sources  | ■ Ephemeral Waterbody    |
| □ Parcel Boundary         |                       |                          |

Total River Miles to Crossing:  
0.95



**Site: Camp Four Creek (sasw005)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







1:6,400

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|---------------------------|-----------------------|--------------------------|
| ● Milepost                | ✱ Waterbody Crossing  | ■ Pond                   |
| - - - Proposed Centerline | ↔ Public Access Point | ■ Perennial Waterbody    |
| ■ Proposed Workspace      | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land             | — Additional Sources  | ■ Ephemeral Waterbody    |
| □ Parcel Boundary         |                       |                          |

Total River Miles to Crossing:  
1.82



Site: **UNT of Feldcher Creek (sirb010p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







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|-------------------------|-----------------------|--------------------------|
| ● Milepost              | ✱ Waterbody Crossing  | □ Pond                   |
| --- Proposed Centerline | ↔ Public Access Point | ■ Perennial Waterbody    |
| □ Proposed Workspace    | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land           | — Additional Sources  | ■ Ephemeral Waterbody    |
| □ Parcel Boundary       |                       |                          |

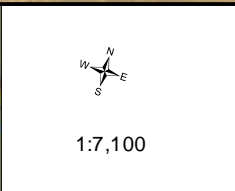
Total River Miles to Crossing:  
1.52



**Site: Feldcher Creek (WDH-103)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







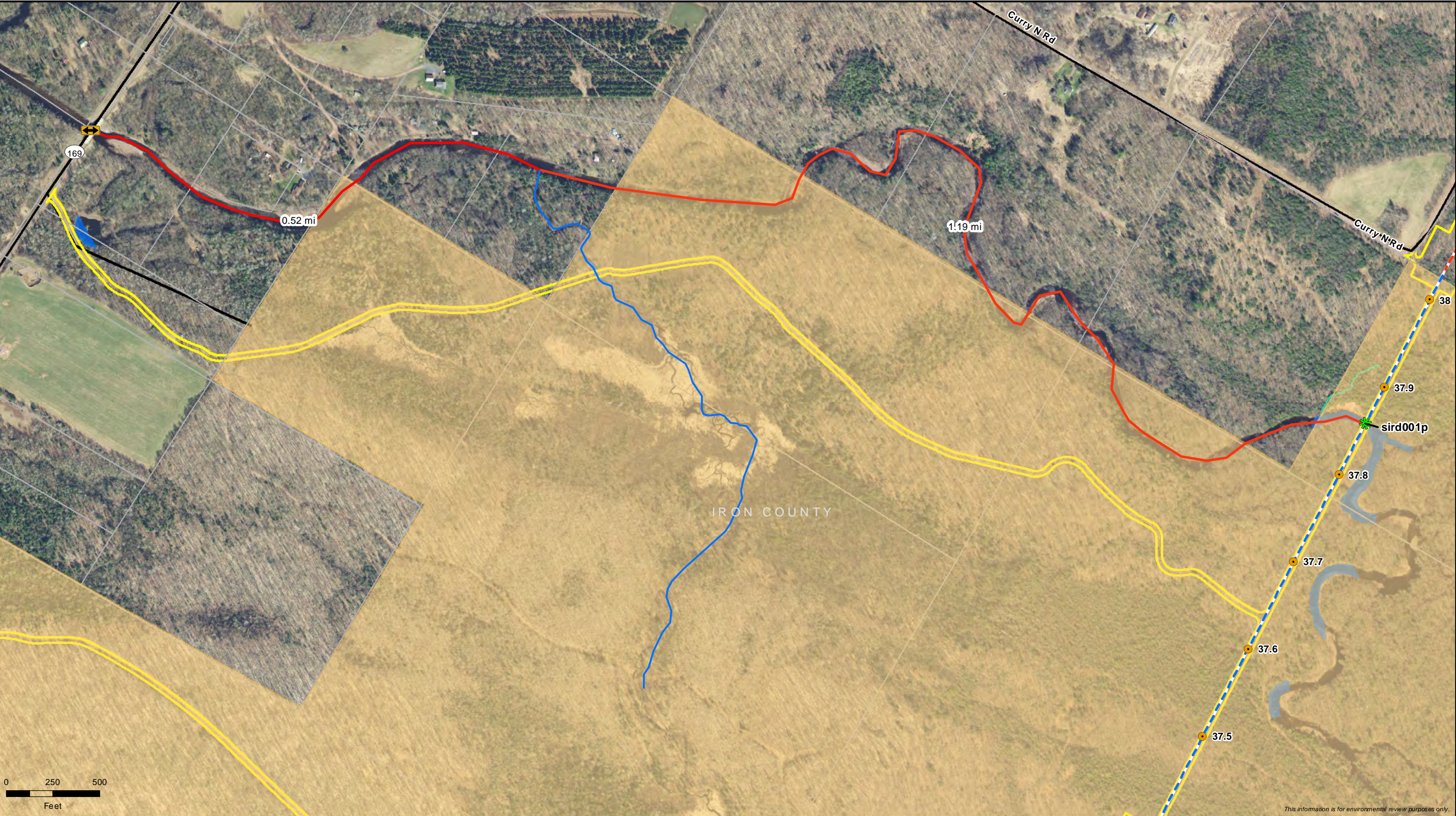
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|---|--|---|--|
| <ul style="list-style-type: none"><li>Milepost</li><li>Proposed Centerline</li><li>Proposed Workspace</li><li>Public Land</li><li>Parcel Boundary</li></ul> | <ul style="list-style-type: none"><li>Waterbody Crossing</li><li>Public Access Point</li><li>AOI Stream</li><li>Additional Sources</li></ul> | <ul style="list-style-type: none"><li>Pond</li><li>Perennial Waterbody</li><li>Intermittent Waterbody</li><li>Ephemeral Waterbody</li></ul> | <ul style="list-style-type: none"><li>Reservation Boundary</li></ul> |
|---|--|---|--|

Total River Miles to Crossing:  
3.02

**Site: Tyler Forks (sirb012p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.

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1:5,900

- |                         |                       |                          |
|-------------------------|-----------------------|--------------------------|
| ● Milepost              | ★ Waterbody Crossing  | □ Pond                   |
| --- Proposed Centerline | ⬆ Public Access Point | ■ Perennial Waterbody    |
| ▬ Proposed Workspace    | — AOI Stream          | ■ Intermittent Waterbody |
| ■ Public Land           | — Additional Sources  | ■ Ephemeral Waterbody    |
| □ Parcel Boundary       |                       |                          |

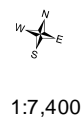
Total River Miles to Crossing:  
1.7



**Site: Potato River (sird001p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







- |                         |                        |                          |
|-------------------------|------------------------|--------------------------|
| ● Milepost              | ★ Waterbody Crossing   | ■ Pond                   |
| --- Proposed Centerline | ↔ Public Access Point  | ■ Perennial Waterbody    |
| --- Proposed Workspace  | --- AOI Stream         | ■ Intermittent Waterbody |
| ■ Public Land           | --- Additional Sources | ■ Ephemeral Waterbody    |
| □ Parcel Boundary       |                        |                          |

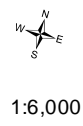
Total River Miles to Crossing:  
1.64



**Site: UNT of Vaughn Creek (sird009p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.







- |                         |                        |                          |
|-------------------------|------------------------|--------------------------|
| ● Milepost              | ✱ Waterbody Crossing   | ■ Pond                   |
| --- Proposed Centerline | ➡ Public Access Point  | ■ Perennial Waterbody    |
| ■ Proposed Workspace    | --- AOI Stream         | ■ Intermittent Waterbody |
| ■ Public Land           | --- Additional Sources | ■ Ephemeral Waterbody    |
| □ Parcel Boundary       |                        |                          |

Total River Miles to Crossing:  
1.53



**Site: Vaughn Creek (sird016p)**  
Water Quality Site Sampling  
Line 5 Wisconsin Segment Relocation Project  
Enbridge Energy, L.P.

