

ENBRIDGE LINE 5 WISCONSIN SEGMENT RELOCATION PROJECT - WETLAND TIMED MEANDER SURVEYS REPORT

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PROJECT BACKGROUND

In Wisconsin, the existing Line 5 pipeline owned by Enbridge Energy, Limited Partnership (“Enbridge”) crosses Douglas, Bayfield, Ashland, and Iron Counties. Within Ashland County, the existing Line 5 pipeline crosses approximately 12 miles of the Bad River Reservation (“Reservation”) of the Bad River Band of Lake Superior Chippewa Tribe. The Line 5 Wisconsin Segment Relocation Project (“Project”) will replace approximately 20 miles of the existing Line 5 pipeline, including the approximate 12 miles of pipeline within the Reservation, with about 41.1 miles of a new, 30-inch outside diameter pipeline segment that will be located entirely outside the exterior boundaries of the Reservation (**Figure 1**).

As part of the environmental review process, wetland surveys were conducted during the 2019 and 2020 field seasons following the methodology described in the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual¹ and Regional Supplement for the Northcentral and Northeast Region². Wetland delineations involved collecting sample transects from upland to wetland and recording this information on standardized wetland determination data forms. Additionally, each collected wetland sample point was classified using the Cowardin system, a simple hierarchical national classification system. The community mapping of the wetland features was also based on the assigned Cowardin classification. A secondary classification was also assigned for each wetland sample point using the Eggers and Reed³ classification system. The latter system is much more specific than the Cowardin system, focused on wetland plant communities of Minnesota and Wisconsin. However, the Eggers and Reed classification system is broad compared to other relevant classification systems, such as the native plant community classification system used in Wisconsin⁴.

The wetland determination data forms specifically reference the area being sampled. However, this measure alone does not address the condition and functional value of that sample area or the entire feature. As such, field crews evaluated each wetland using the Wisconsin Wetland Rapid Assessment Methodology (RAM)⁵, determining the functional value, floristic integrity, condition assessment of the wetland assessment area and buffer, and assessment of potential impacts. The floristic integrity assessment was focused on primary questions pertaining to invasive species cover, strata, Natural Heritage Information plant community ranking, and relative frequency of the plant community within the watershed. Excluded from this assessment was the optional documentation of vascular plant species and cover/abundance.

Vegetation surveys were conducted during the 2022 field season on a subset of wetlands within the current Project area to expand the assessment of floristic integrity. This subset of wetlands was restricted to those that ranged in quality from moderate to high based on the data collected during the initial wetland delineation field efforts (2019–2020). The 2022 vegetation surveys involved the implementation of timed-meander surveys, documenting observed species and species cover.

¹ Environmental Laboratory. (1987). "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

² U.S. Army Corps of Engineers. 2011. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

³ Eggers S. D., Reed D. M., Reed D. M. 2015 Wetland Plants and Plant Communities of Minnesota and Wisconsin, Version 3.2. U.S. Army Corps of Engineers, St. Paul District.

⁴ Epstein, E.E. 2017. Natural communities, aquatic features, and selected habitats of Wisconsin. Chapter 7 in The ecological landscapes of Wisconsin: An assessment of ecological resources and a guide to planning sustainable management. Wisconsin Department of Natural Resources, PUB-SS-1131H 2017, Madison

⁵ <https://dnr.wisconsin.gov/topic/wetlands/methods.html#:~:text=The%20Wisconsin%20Wetland%20Rapid%20Assessment,wetland%20perform s%20a%20given%20function.> Accessed December 2022.

METHODS

Due to the nature of the proposed Project, meander efforts were restricted to specific project (corridor) limits. These limits are based on the anticipated project footprint for both the Project construction corridor (including the construction workspace) and the associated access roads. The evaluated survey corridor width for the proposed pipeline ranged from 130 to 320 feet, and the access road corridor width was 80 feet.

Two MNR field teams conducted surveys, and a field botanist led each team. Evaluation efforts involved timed-meander surveys but deviated from the traditional approach in two ways. Traditional timed-meander surveys evaluate entire features, in this case, wetlands. In being restricted to a corridor, survey efforts only reflect those spatial limits. The second deviation pertains to the time limits and approach, as there are a variety of ways to implement the time duration. In Wisconsin⁶, species are recorded in 5-minute increments, noting which increment a species was first observed (e.g., 0-5 minutes, 5-10 minutes, etc.). It is suggested that surveys occur for a minimum of 30 minutes. This process can continue beyond 30 minutes under different scenarios, but the process is also flexible and allows the practitioner to stop before reaching a full 30 minutes. The approach implemented for this Project was to evaluate the entire defined assessment area and record every vascular plant species encountered. Another deviation specific to the Wisconsin method was that species abundance codes were not collected for this survey since they are non-numerical and cannot be used for analysis purposes.

Independent timed-meander surveys were conducted for those wetland features with multiple Eggers and Reed community types, each serving as a separate assessment area. In several cases, a community component of specific wetlands was reclassified and merged with the primary Eggers and Reed community. This was generally related to past forest management, where a portion of the forested community was now open, but the original delineations classified those as separate communities. It is anticipated that these areas will revert to having canopy cover and are considered one community.

The vegetative cover was recorded using areal cover and categorizing that cover using a modified Braun-Blanquet Scale as presented in Table 1. A point of clarification regarding the Braun-Blanquet Scale is the subject of a single occurrence of a species. There are instances, particularly with tree species, where the areal cover of that individual exceeds 5% cover and thus would be recorded as having a midpoint cover of 15%. This situation is rare, with most single individuals recorded as having less than 5% areal cover and a midpoint value of 1.

Table 1. Modified Braun-Blanquet Scale

Cover Class	Midpoint Cover
< 5% single individual	1
< 5% having two or more individual	2.5
5-25%	15
25-50%	37.5
50-75%	62.5
75-100%	87.5

The Wisconsin Department of Natural Resources (WDNR)⁷ developed the Coefficient of Conservatism values used here, and the revised species nomenclature is based on the updates provided in the WDNR

⁶ Timed-Meander Sampling Protocol for Wetland Floristic Quality Assessment, WDNR

⁷ Bernthal, T. W. 2003. Development of a floristic quality assessment methodology for Wisconsin. Wisconsin Department of Natural Resources, Bureau of Integrated Science Services, Madison, Wis. PUB-SS-986 2003.

Floristic Quality Assessment (FQA) Calculator⁸. Meander surveys only represent the vegetation present or identifiable during the survey effort. As such, ephemeral species or species lacking recognizable diagnostic features were not documented during this survey.

Species encountered and associated cover values were collected electronically using field tablets. The data collected were then used to calculate two metrics, the Floristic Quality Index (FQI) and Mean C-value. Additionally, these two metrics were calculated considering native species only and then separately for all species observed, along with weighted calculation scores based on the cover.

Overall floristic quality can be determined in multiple ways, including the generalized wetland condition scale provided in the RAM approach or the regional and community-specific wetland condition scale provided in the Wisconsin FQA Calculator⁹.

The more general RAM approach provides a single scale of four condition categories (low, medium, high, and exceptional) for the unweighted FQI and unweighted Mean C-value metrics (**Table 2**). The scale is general in that scores associated with the condition categories are uniform for the entire state, and plant communities are not considered.

Table 2. Wisconsin Wetland Rapid Assessment Methodology Floristic Integrity Scale

Metric	Low	Medium	High	Exceptional
FQI	<13	13-23	23-32	32
Mean C ($\bar{C}$)	<2.4	2.4-4.2	4.3-4.7	>4.7

This second wetland condition scale is based on five categories (Very Poor, Poor, Fair, Good, and Excellent). These condition category benchmarks pertain only to the Mean C-value, both non-weighted ($\bar{C}$) and weighted ($w\bar{C}$). Additionally, this scale is specific to a subset of native plant communities and is separated into four geographical regions¹⁰. The condition benchmarks presented in **Table 3** are for the weighted Mean C-values specific to the Northern Lakes and Forests Ecoregion (NLFE), with the Project occurring entirely within this ecoregion.

Table 3. Weighted Mean C ($w\bar{C}$) Condition Benchmarks for Northern Lakes and Forests Ecoregion

System	Natural Community	Condition Category				
		Least Disturbed		Most Disturbed		
		Excellent	Good	Fair	Poor	Very Poor
Emergent	Emergent Marsh	> 7.1	5.2 - 7.1	2.8 - 5.1	0.7 - 2.7	< 0.7
	Northern Sedge Meadow	> 7.1	5.2 - 7.1	3.5 - 5.1	< 3.5	
Shrub- Scrub	Shrub Carr	> 5.1			3.9 - 5.1	< 3.9
	Alder Thicket	> 5.3	4.5 - 5.3	4.2 - 4.4	3.8 - 4.1	< 3.8
	Open Bog	> 8.9	8.0 - 8.9	< 8.0		
	Muskeg	> 8.5	7.9 - 8.5	< 7.9		

⁸ <https://dnr.wisconsin.gov/topic/wetlands/methods.html>; Accessed December 2022.

⁹ https://dnr.wisconsin.gov/sites/default/files/topic/Wetlands/WDNR_FQA_CALCULATOR.xlsx; Accessed December 2022.

¹⁰ **Region 1:** Northern Lakes and Forest; **Region 2:** North Central Hardwood Forest/Western Corn Belt Plains; **Region 3:** Southeast WI Till Plains/Central Corn Belt Plains; and **Region 4:** Driftless Area.

Forested	Black Spruce/ Tamarack Swamp	> 7.9	7.4 - 7.9	6.8 - 7.3	5.7 - 6.7	< 5.7
	Cedar Swamp (NWMF)	> 7.4	6.9 - 7.4	< 6.9		
	Northern Hardwood Swamp	> 6.2	5.7 - 6.2	4.0 - 5.6	2.5 - 3.9	< 2.5

Source: Hlina, P., NP Danz, K. Beaster, D. Anderson S. Hagedorn. 2015. Northern Lakes and Forests Inland Wetland Surveys: Relationship between Floristic Quality Assessment and Anthropogenic Stressors. Technical Report 2015-2. Lake Superior Research Institute, University of Wisconsin-Superior, Superior, WI.

A crosswalk for the communities evaluated is provided in **Table 4**. This list of communities is specific to wetland features encountered during field efforts and subsequently classified using the Eggers and Reed classification system. This list of nine Eggers and Reed communities is cross-referenced with the equivalent community as classified by the state of Wisconsin¹¹ (Wisconsin Natural Communities) and for the NLFE.

As stated previously, the Eggers and Reed system is a broad classification system. In contrast, other systems, such as the Wisconsin Natural Communities classification system or Minnesota Native Plant Community classification system,¹² are more defined. For example, the Project area includes two black ash-dominated wet forest communities, the Northern Hardwood Swamp and Forested Seep, as classified using the Wisconsin Natural Communities system. However, these two communities are treated as a single community in the other two classification systems. Additionally, specific Eggers and Reed communities are either excluded or do not perfectly align with the NLFE communities. Those communities classified as Fresh (Wet) Meadow, Floodplain Forest, and Hardwood Swamp -Vernal Pool subtype (Vernal Pool) lack an equivalent community type in the list of NLFE communities.

Another separate wet forest community within the Project area is a mixed conifer and hardwood community of balsam fir (*Abies balsamea*), yellow birch (*Betula alleghaniensis*), black ash (*Fraxinus nigra*), northern white cedar (*Thuja occidentalis*), and hemlock (*Tsuga canadensis*). Northern white cedar or hemlock are important canopy species, but hardwood species, mainly black ash, are an important component of these features. This particular community is what NatureServe Explorer identifies as a *Tsuga canadensis* - *Betula alleghaniensis* Swamp Forest (CEGL005003)^{13, 14}. The community falls under the concept of a Northern Wet-mesic Forest in the NatureServe Explorer crosswalk with the native plant communities of Wisconsin. It is important to note that the conceptual Northern Wet-mesic Forest¹⁵, as described, is a northern white cedar-dominated community on peat soils. The community, as expressed here, would be considered a subtype of that community. Furthermore, this community would be correlated with the NLFE Cedar Swamp community, although these two “communities” are different in terms of species composition and richness.

Table 4. Community Crosswalk

Eggers and Reed ⁱ	Wisconsin Natural Communities	Northern Lakes and Forests Ecoregion
Alder Thicket	Alder Thicket	Alder Thicket
Coniferous Bog	Black Spruce Swamp	Muskeg
Coniferous Swamp	Northern Wet-mesic Forest	Cedar Swamp

¹¹ Epstein, E.E. 2017. Natural communities, aquatic features, and selected habitats of Wisconsin. Chapter 7 in The ecological landscapes of Wisconsin: An assessment of ecological resources and a guide to planning sustainable management. Wisconsin Department of Natural Resources, PUB-SS-1131H 2017, Madison

¹² <https://www.dnr.state.mn.us/npc/classification.html>; Accessed December 2022.

¹³ https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.690084/Tsuga_canadensis_-_Betula_alleghaniensis_Swamp_Forest; Nov. 2022

¹⁴ <https://www1.usgs.gov/csas/nvcs/unitDetails/690084>; Accessed December 2022.

¹⁵ <https://dnr.wi.gov/topic/EndangeredResources/Communities.asp?mode=detail&Code=CPFOR036WI>; Accessed December 2022.

Floodplain Forest	Floodplain Forest	NA
Fresh (Wet) Meadow	Fresh Wet Meadow	NA
Hardwood Swamp	- Northern Hardwood Swamp - Forested Seep	Northern Hardwood Swamp
Shrub-Carr	Shrub-Carr	Shrub-Carr
Open Bog	Open Bog	Open Bog
Hardwood Swamp (Vernal Pool Subtype)	Vernal Pool	NA

¹ List only includes Eggers and Reed Communities evaluated here.

RESULTS

Field surveys were conducted between August 22 – September 2, 2022. This involved the evaluation of 73 wetland features, with nine of these features having multiple community types. A complete list of all evaluated wetland features is provided in **Appendix A**. The accompanying map set showing meander routes is included under the **Maps** sections.

Nine different Eggers and Reed wetland community types were encountered during the timed meander survey efforts. The Forested Seep¹⁶ community, as defined, is treated here as the tenth community. The Hardwood Swamp community was the most prevalent community surveyed, accounting for over half the features evaluated. The other encountered communities were relatively infrequent.

As previously mentioned, the RAM approach is more generalized, looking at unweighted FQI and Mean C metrics, with no consideration given to plant community or location. This is counter to the regional and community-specific wetland condition scale provided in the Wisconsin FQA Calculator. Both evaluation tools are presented here, each provides valuable information, but neither is fully comprehensive.

A list of unweighted FQI condition ratings using the broader RAM scale is provided in **Table 5**. This is organized to show the plant community, FQI rating, and the number of features with that rating. The condition rating for each feature is provided in **Appendix B**. Most independent community features were rated exceptional (54), with a significant number rated as high (24), and only eight features having a medium value.

Table 5. Unweighted Floristic Quality Index Score Ratings by Community

Community	FQI Rating	Number of Features
Alder Thicket	Exceptional	4
Coniferous Bog	Exceptional	1
Coniferous Swamp	Exceptional	7
Floodplain Forest	Exceptional	4
	High	2
	Medium	1
Fresh (Wet) Meadow	Exceptional	1
	High	6
	Medium	2

¹⁶ <https://dnr.wi.gov/topic/endangeredresources/communities.asp?mode=detail&Code=CPFOR025WI>; Accessed December 2022.

Community	FQI Rating	Number of Features
Hardwood Swamp	Exceptional	29
	High	14
	Medium	2
Hardwood Swamp - Forested Seep	Exceptional	2
Open Bog	Exceptional	2
Shrub-Carr	Exceptional	2
	Medium	1
Vernal Pool	High	2
	Medium	2

Similarly, unweighted Mean C condition ratings by community type are provided in **Table 6**. The condition rating for each feature is provided in **Appendix B**, which also includes the unweighted FQI condition ratings. Most of the independent community features were rated exceptional (44) or high (24), with 15 features with medium value and one feature having a low value.

Table 6. Mean C Score Ratings by Community

Community	Mean C Rating	Number of Features
Alder Thicket	High	4
Coniferous Bog	Exceptional	1
Coniferous Swamp	Exceptional	7
Floodplain Forest	Exceptional	1
	High	2
	Medium	4
Fresh (Wet) Meadow	Exceptional	1
	High	3
	Medium	4
	Low	1
Hardwood Swamp	Exceptional	29
	High	11
	Medium	5
Hardwood Swamp - Forested Seep	Exceptional	2
Open Bog	Exceptional	2
Shrub-Carr	Exceptional	1
	High	1
	Medium	1
Vernal Pool	High	3
	Medium	1

The second system provides a much different assessment of quality. **Table 7** provides a range of weighted Mean C ($w\bar{C}$) and Condition Category for those Natural Communities that have been assigned a benchmark score. These individual scores are also presented in **Appendix C**.

Table 7. Community Features Evaluated

Eggers and Reed	Number of Evaluated Features	$\bar{C}$ low	$\bar{C}$ high	Condition Category Range
Alder Thicket	4	3.9	4.7	Poor to Good
Coniferous Bog	1	7.9	7.9	Good
Coniferous Swamp	7	5.2	6.6	Very Poor to Fair
Floodplain Forest	7	2.9	4.7	NA
Fresh (Wet) Meadow	9	2.9	4.8	NA
Hardwood Swamp	45	3.0	6.6	Poor to Excellent
Forested Seep	2	5.7	5.8	Good
Open Bog	2	6.9	8.2	"Very Poor - Fair" ⁱⁱ to Good
Shrub-Carr	3	3.0	5.0	Poor to Good
Vernal Pool	4	3.6	6.5	NA

ⁱⁱ Weighted Mean C scores for the Open Bog community of <7.0 are not differentiated from Fair, Poor, to Very Poor.

Overall, these Condition Categories for the NLFE provide a different picture of wetland quality for these wetland features. As indicated in **Table 7**, the two shrub communities evaluated, Alder Thicket and Shrub-Carr, ranged in quality from poor to good, where the rating was higher for those systems using the RAM scale. Only one Coniferous Bog community was evaluated, having a condition rating of good, where this community is considered excellent with the RAM scale. The other bog community, Open Bog, was encountered twice. The quality of these two features ranged from more disturbed (very poor – fair) to good, but both were ranked as exceptional using the RAM scale.

The Hardwood Swamp community had a considerable range of quality, from poor to excellent, with most evaluated features ranked fair to excellent. This is comparable to the condition values from the RAM scale. The two Forested Seep communities had a weighted Mean C score range of 5.7-5.8, putting that in the category of good, where these are considered exceptional using the RAM scale.

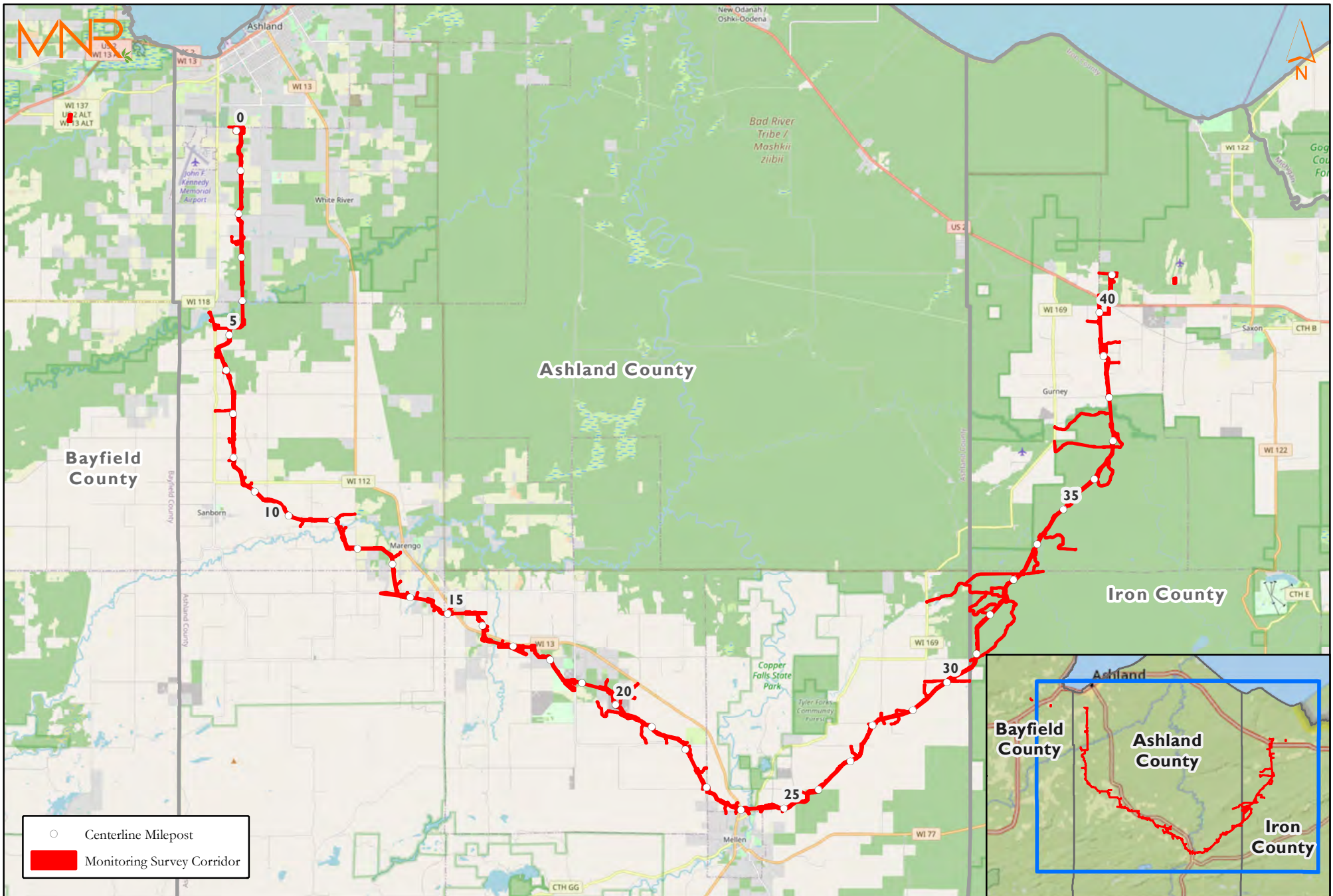
The Conifer Swamp communities ranged in quality from very poor to fair. However, the weighted Mean C scores ranged from 5.2 to 6.6, suggesting that these systems are of higher quality than the condition category rankings suggest. It is possible that lumping this community into the category of Cedar Swamp (NWMF) is miscategorized here, given that the observed systems are far poorer in terms of species richness and structure than the described Cedar Swamp community, but this appears to be the best match. All seven features were ranked as exceptional using the RAM scale.

Finally, the Fresh (Wet) Meadow, the Floodplain Forest, and Vernal Pools communities lacked a condition score with this regionalized system, so floristic quality determination is restricted to the RAM scale.

The full species lists for each wetland with individual species cover and Floristic Quality Metrics are provided in **Appendix D**. Associated representative wetland photos are provided in **Appendix E** and are arranged by milepost, with a brief description of each wetland feature evaluated is provided in **Appendix F**. Additionally, the resumes for the two lead botanists are included in **Appendix G**.

CONCLUSION

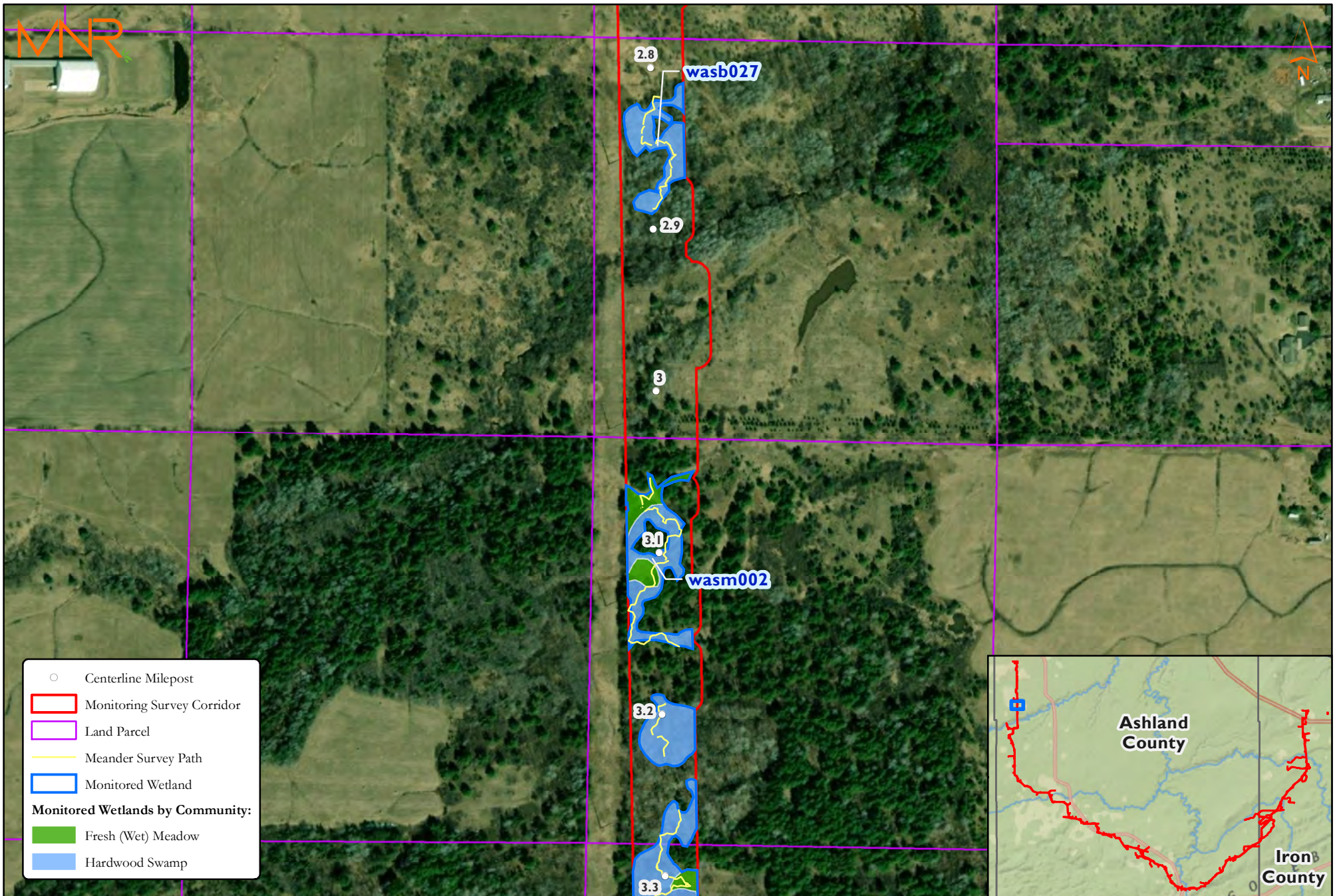
During recent field efforts, 73 wetland features were evaluated to determine floristic quality. This process considered various community classification systems and multiple quality scales, examining the overall floristic quality and species conservatism. Most of the features evaluated were high to exceptional under the statewide rating system, where the quality scores were lower using a regional scale.



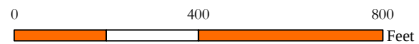
Source: Esri World Topographic Map, National Geographic World Map, US Census Bureau, Date: 11/8/2022

Survey Corridor Location
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Northern Wisconsin

MNR



Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022



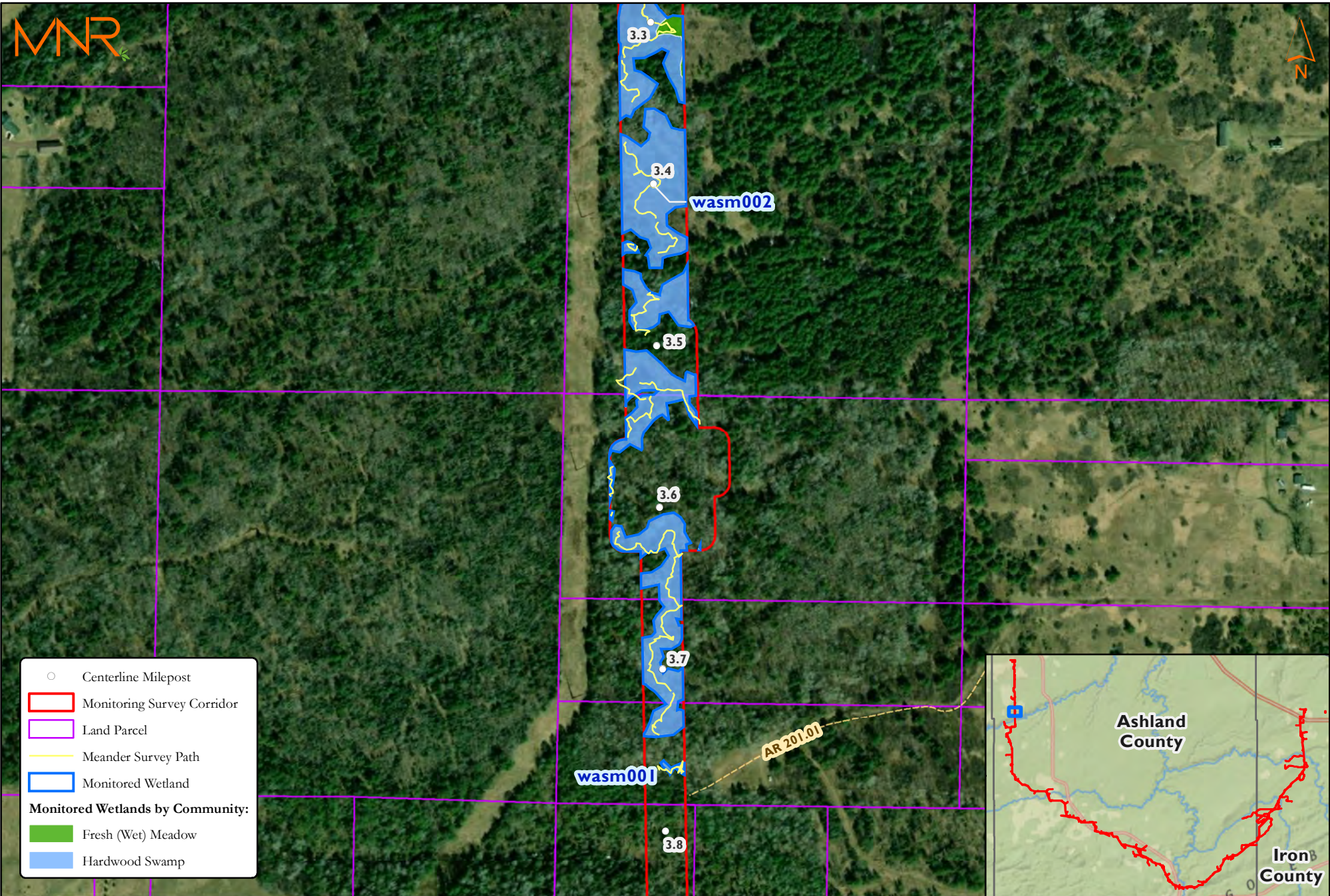
Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland County, Wisconsin

Map 2

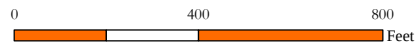
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- Centerline Milepost
 - Monitoring Survey Corridor
 - Land Parcel
 - Meander Survey Path
 - Monitored Wetland
- Monitored Wetlands by Community:**
- Fresh (Wet) Meadow
 - Hardwood Swamp

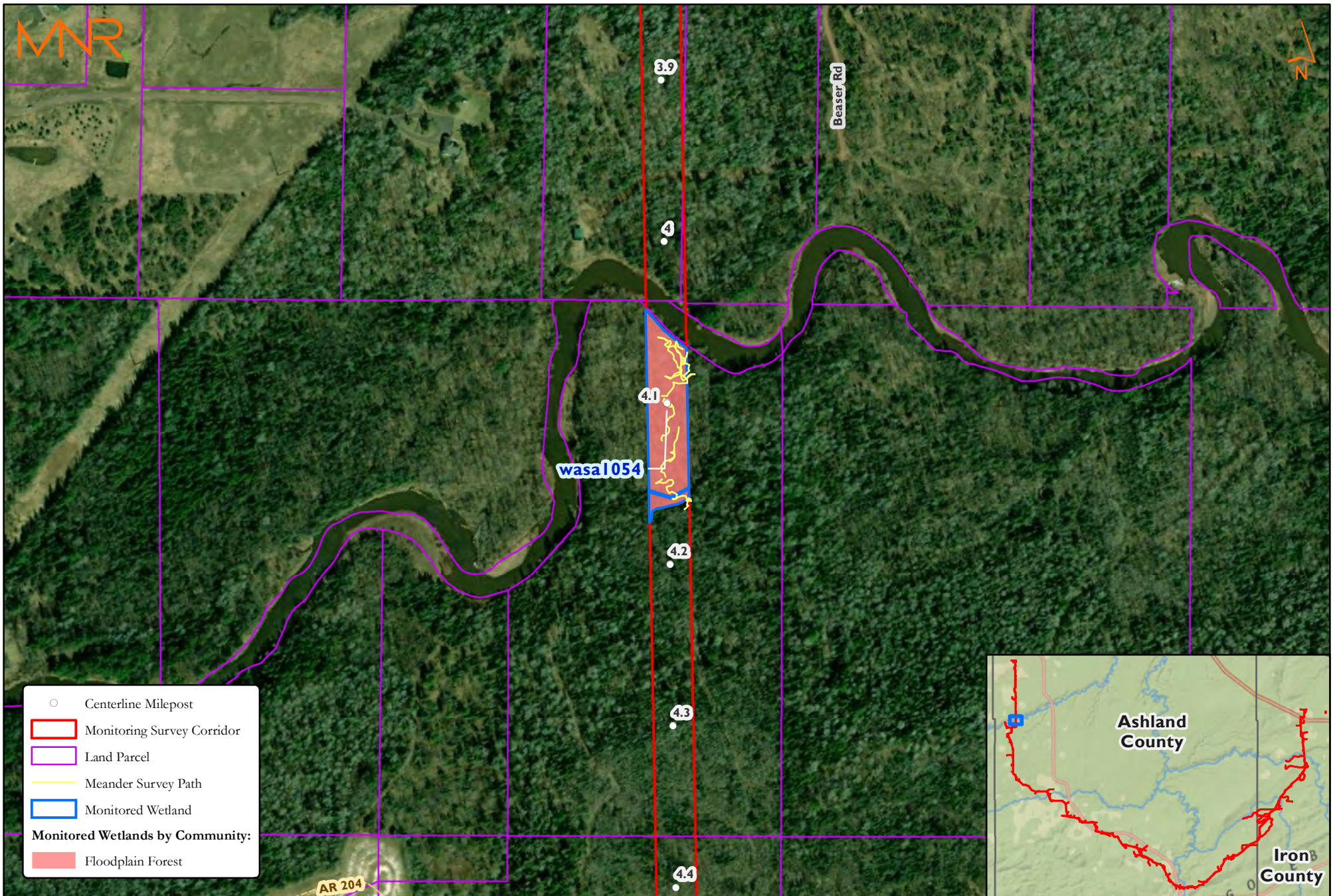


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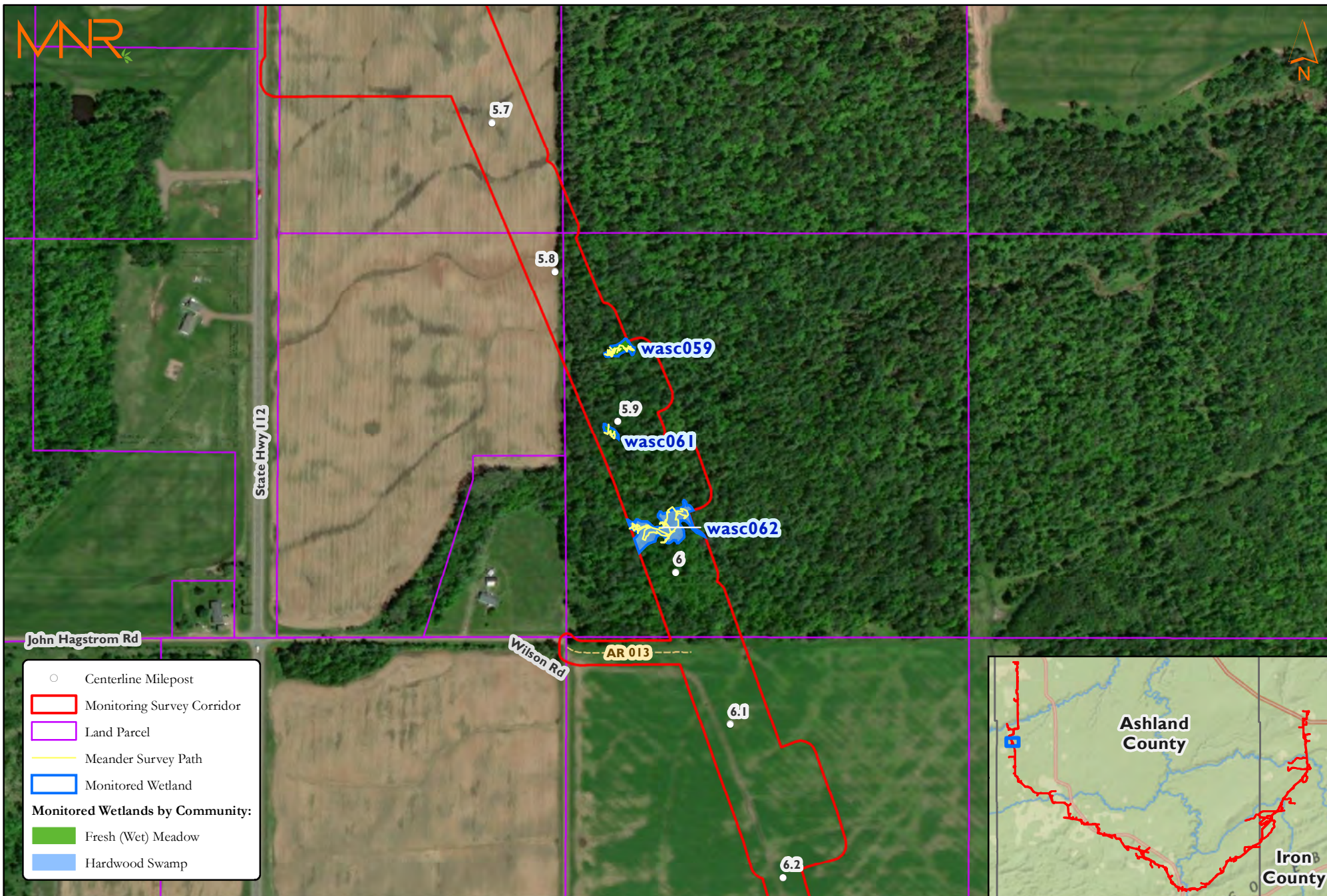


Surveyed High-Quality Wetlands
 High-Quality Wetlands Timed-Meander Survey Monitoring
 Line 5 Wisconsin Segment Relocation Project
 Enbridge Energy, L.P.
 Ashland County, Wisconsin

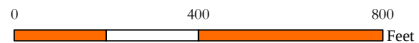
Map 3



Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland County, Wisconsin



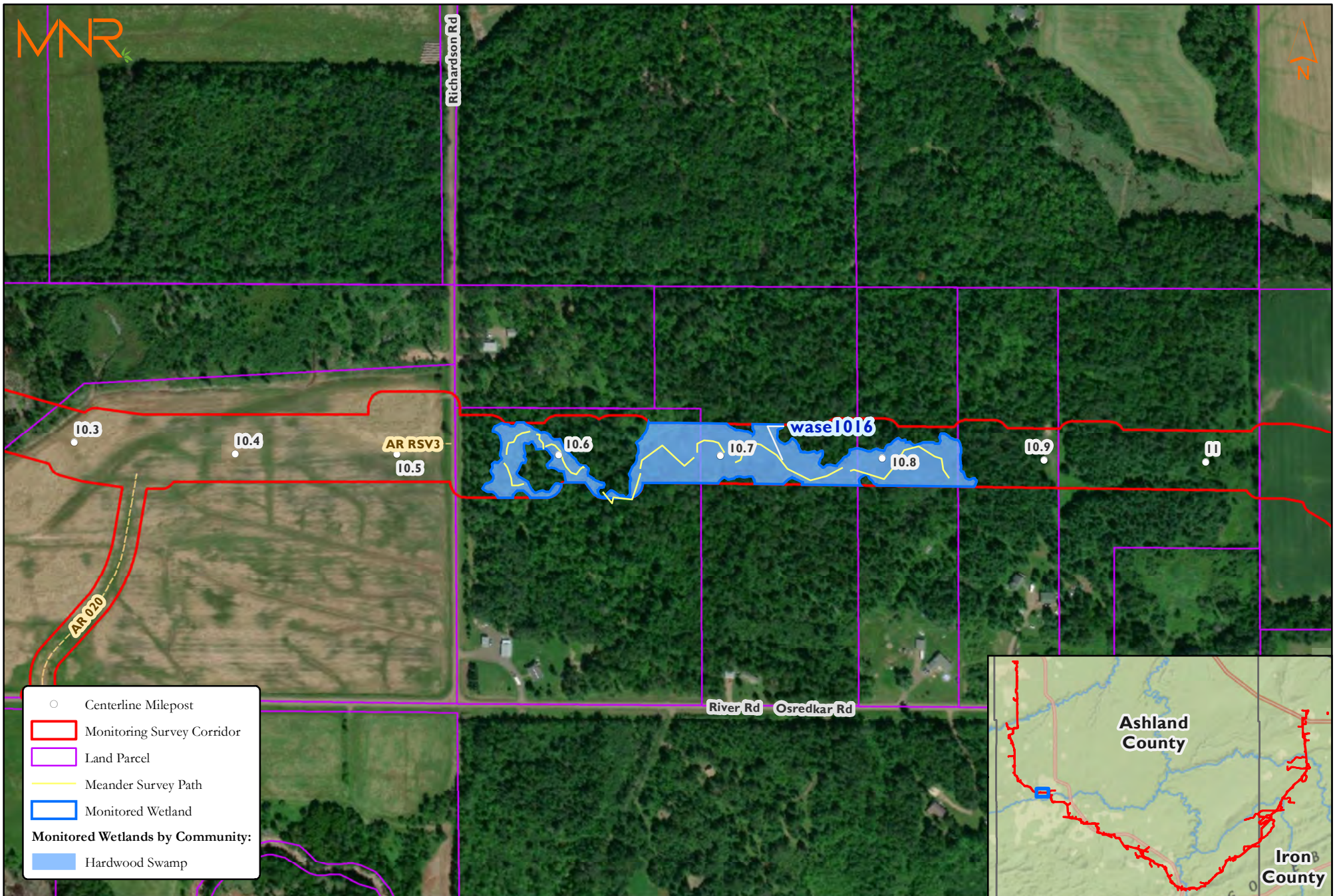
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Surveyed High-Quality Wetlands
 High-Quality Wetlands Timed-Meander Survey Monitoring
 Line 5 Wisconsin Segment Relocation Project
 Enbridge Energy, L.P.
 Ashland County, Wisconsin

Map 5

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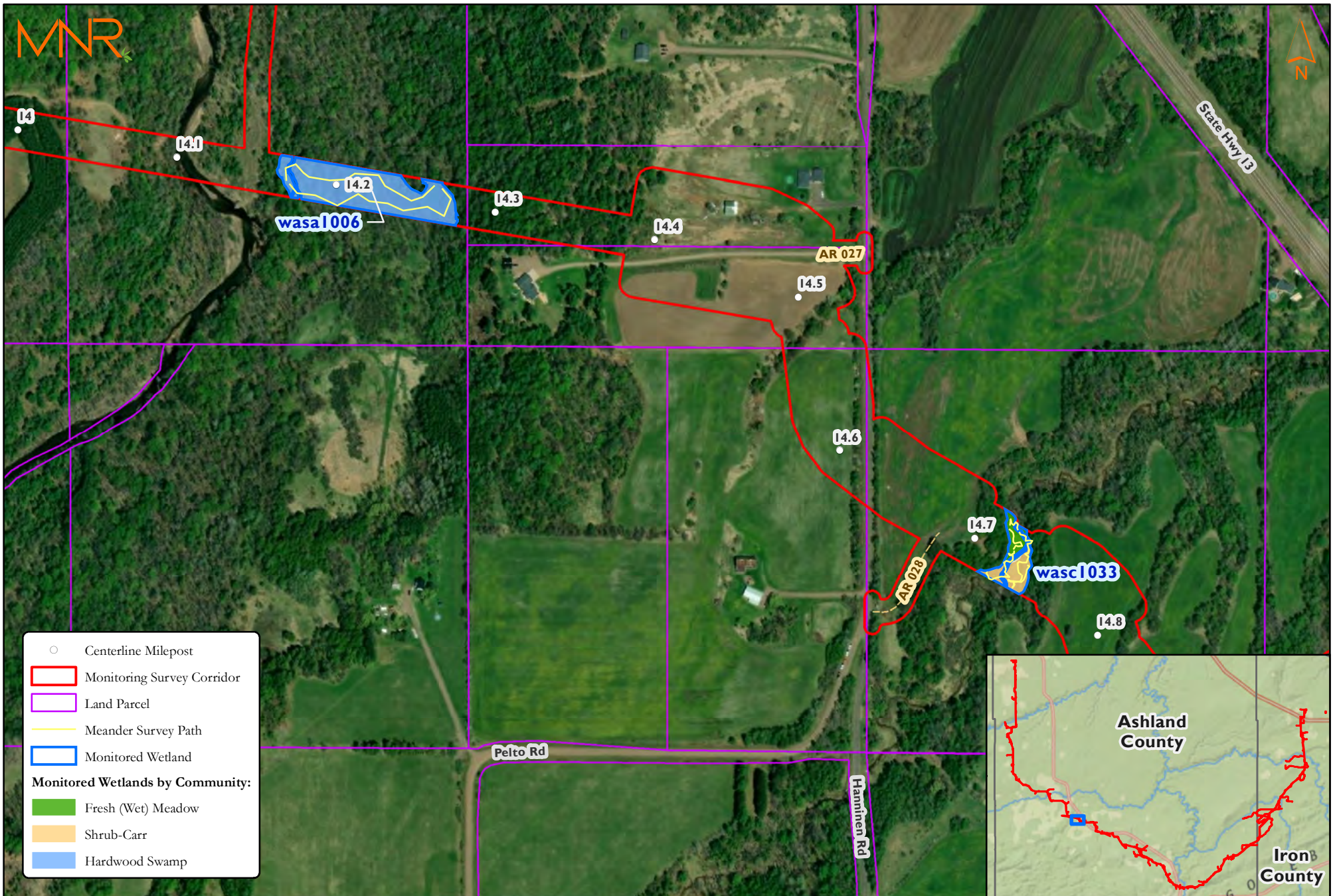
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0 400 800 Feet

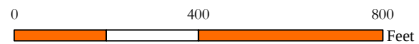
Surveyed High-Quality Wetlands
 High-Quality Wetlands Timed-Meander Survey Monitoring
 Line 5 Wisconsin Segment Relocation Project
 Enbridge Energy, L.P.
 Ashland County, Wisconsin

Map 6

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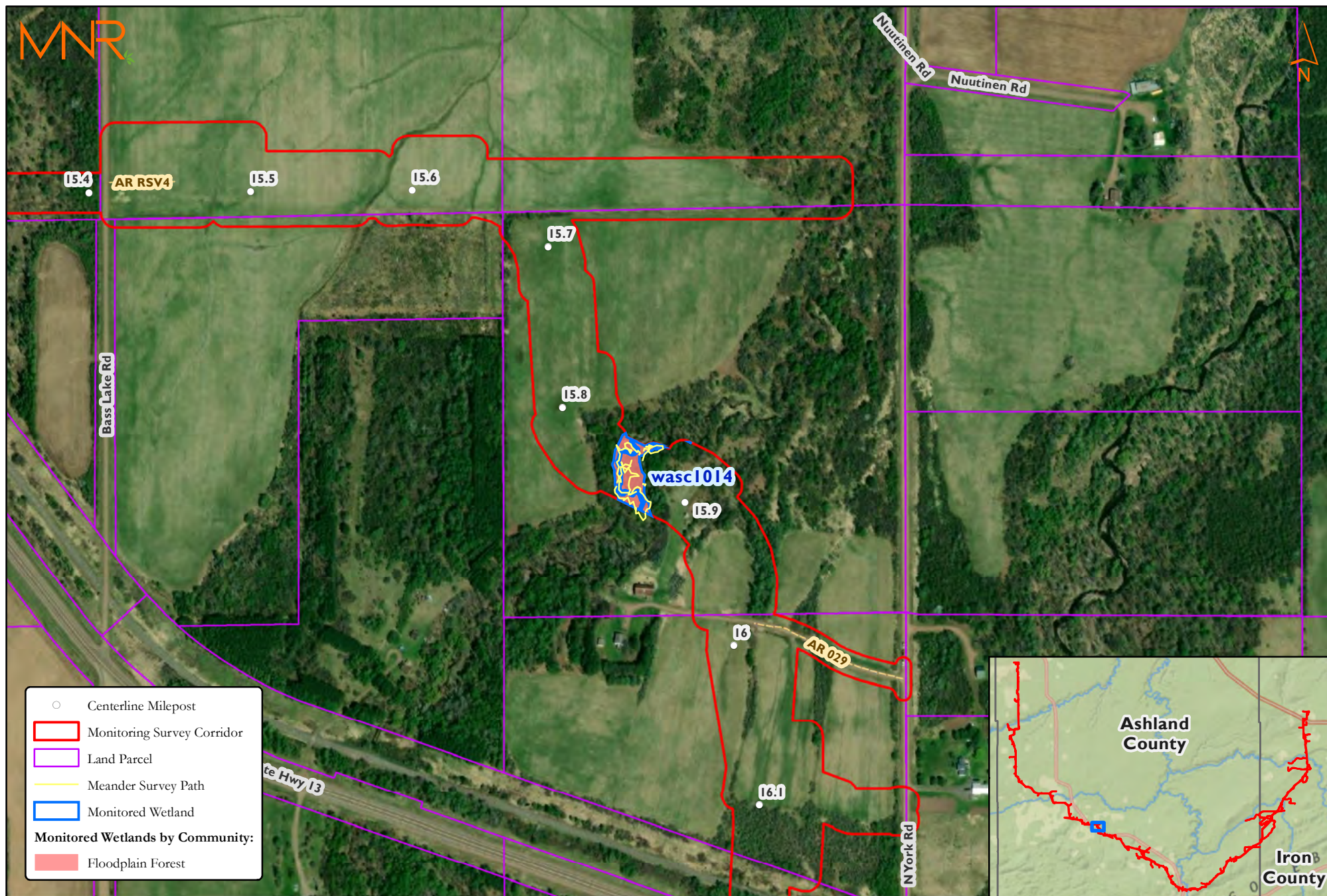


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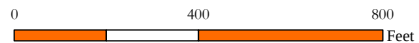


Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland County, Wisconsin

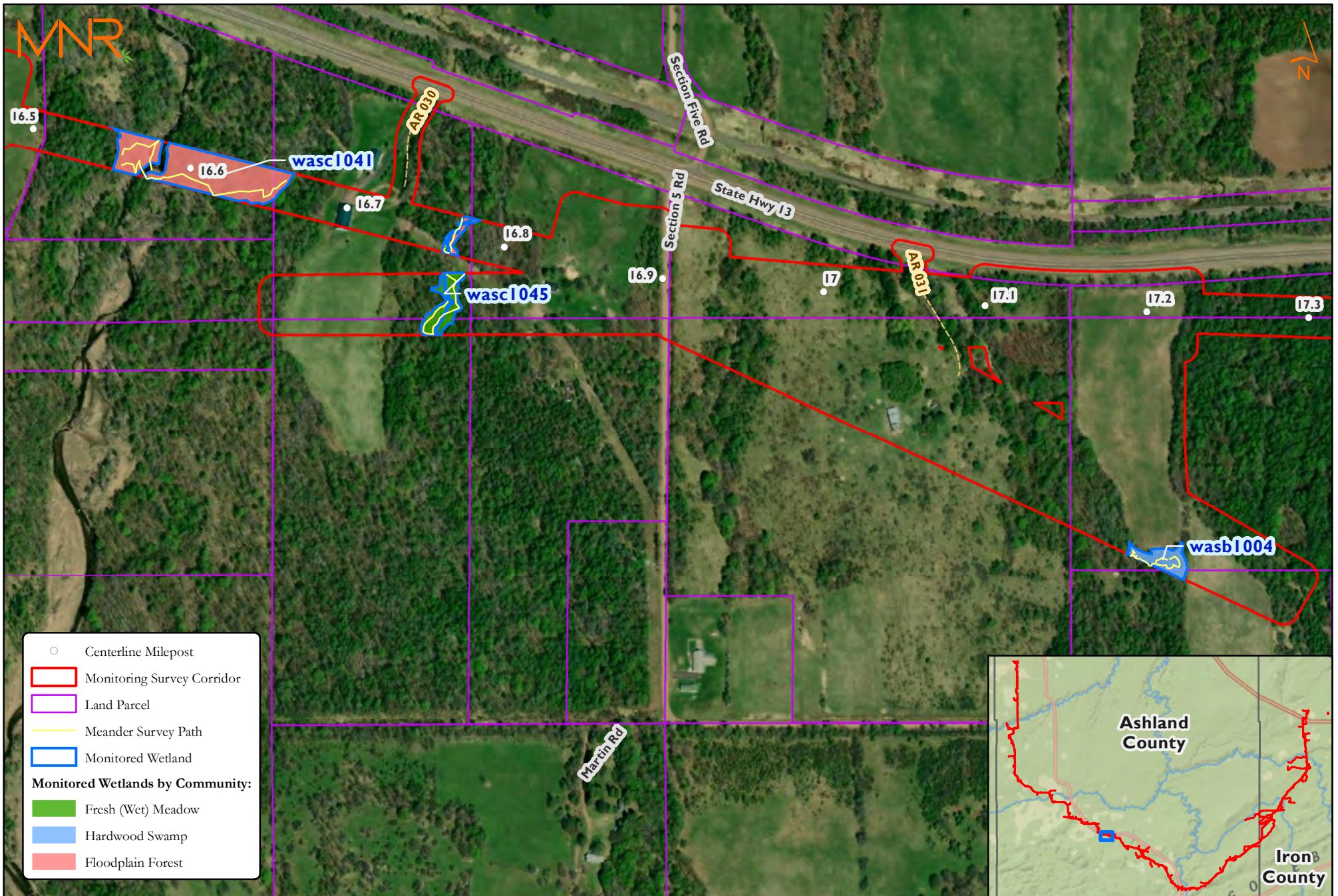
Map 7



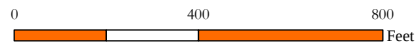
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Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland County, Wisconsin

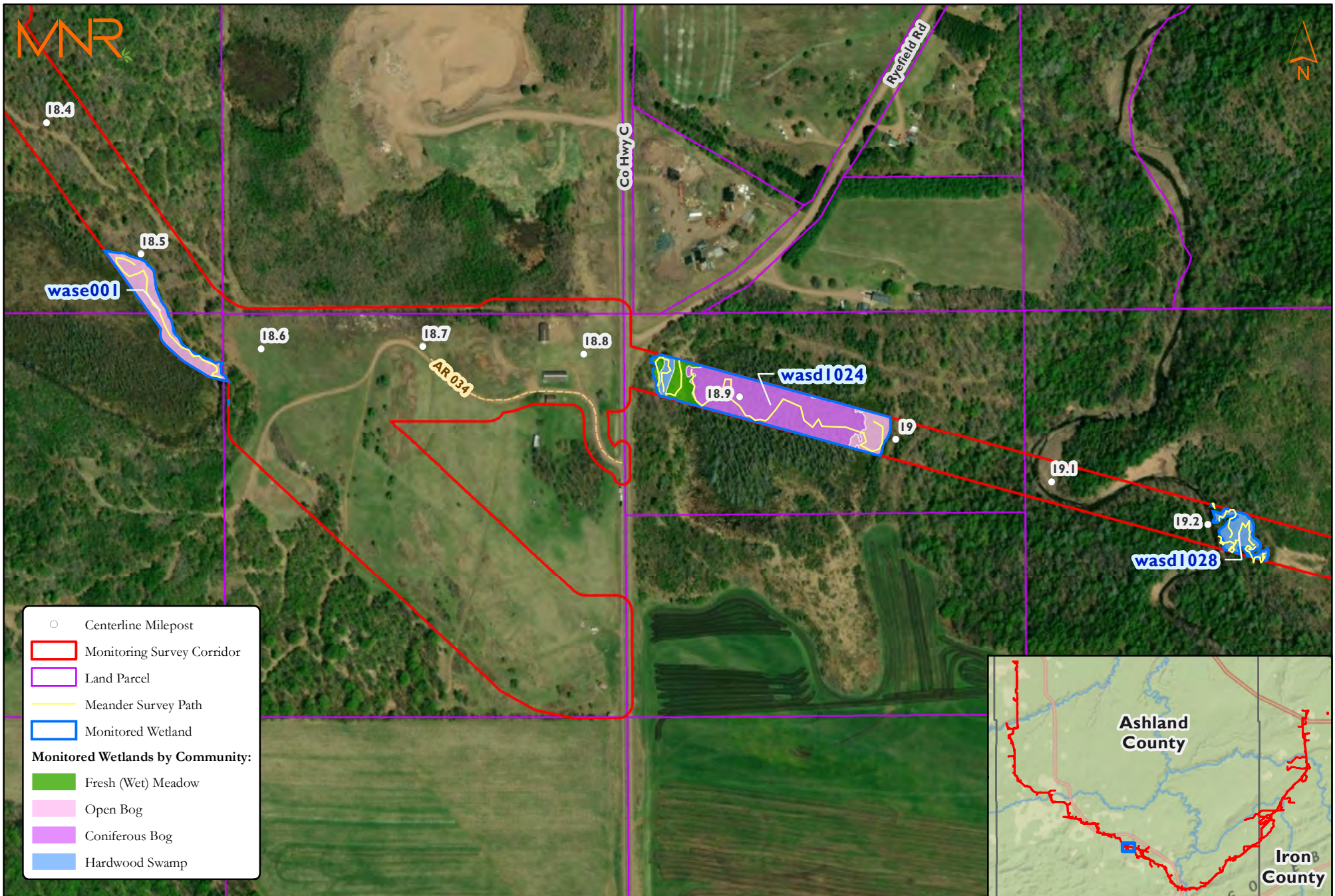


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Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland County, Wisconsin

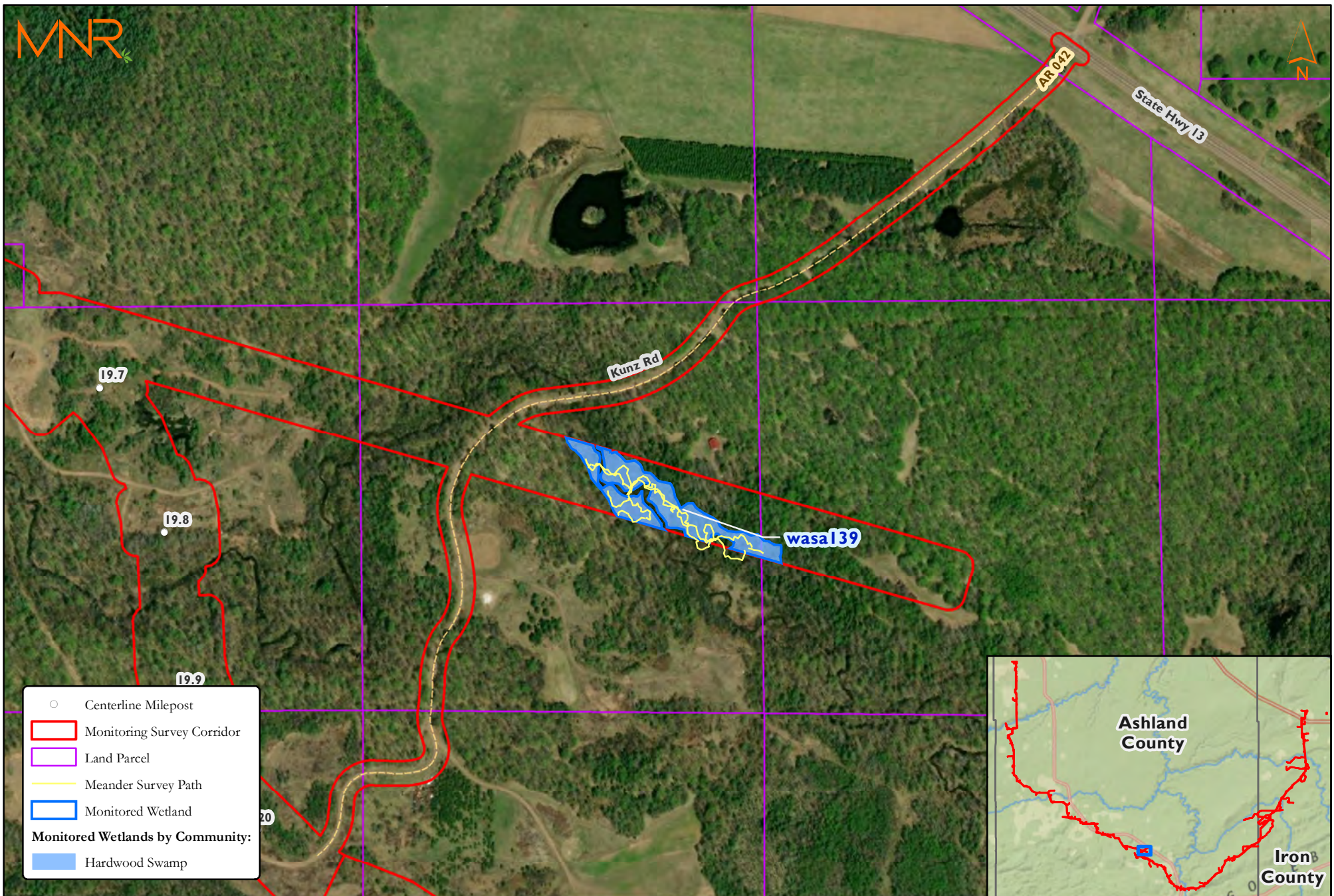
Map 9



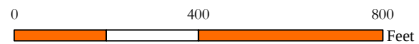
Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022

Surveyed High-Quality Wetlands
 High-Quality Wetlands Timed-Meander Survey Monitoring
 Line 5 Wisconsin Segment Relocation Project
 Enbridge Energy, L.P.
 Ashland County, Wisconsin

Map 10

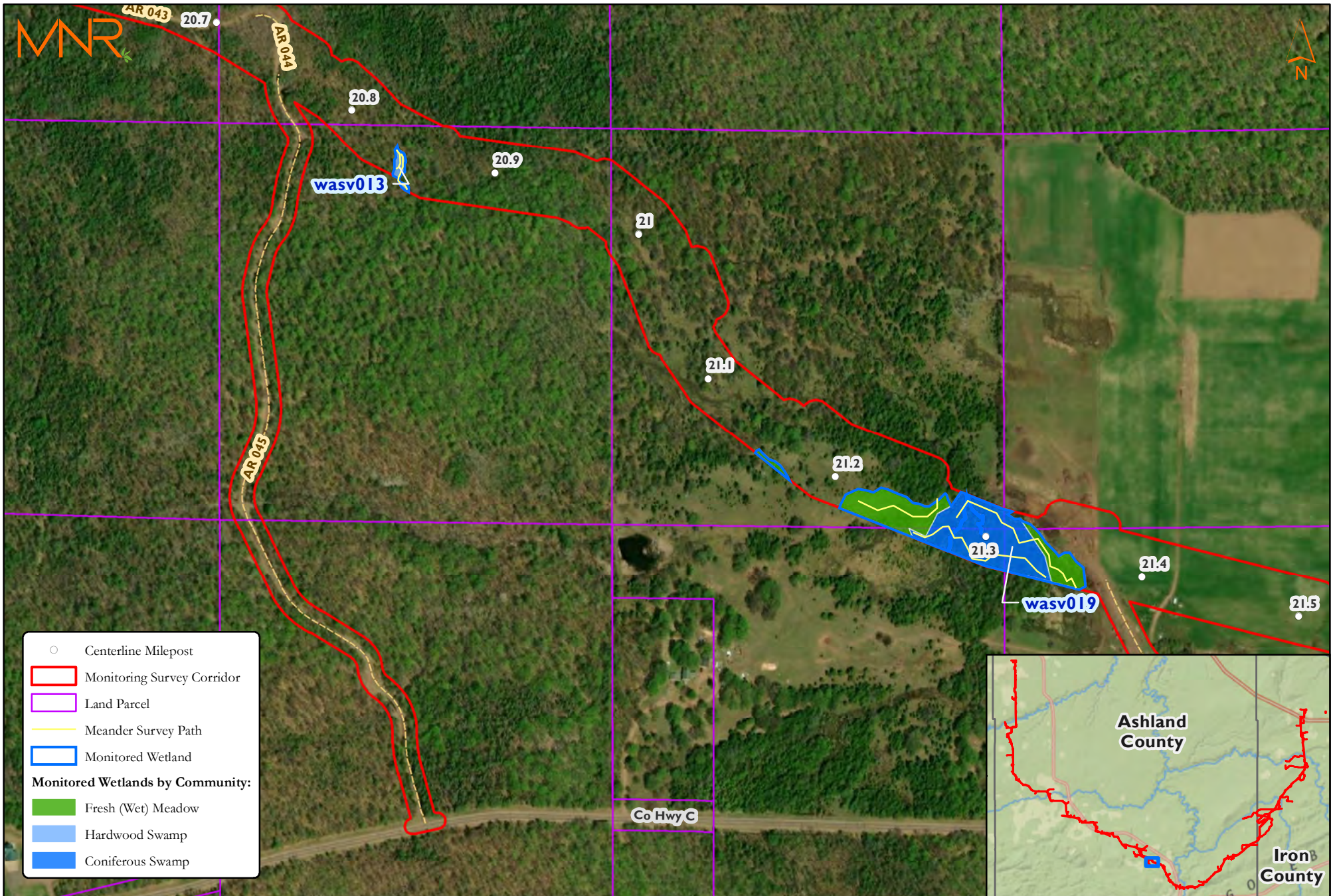


Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022

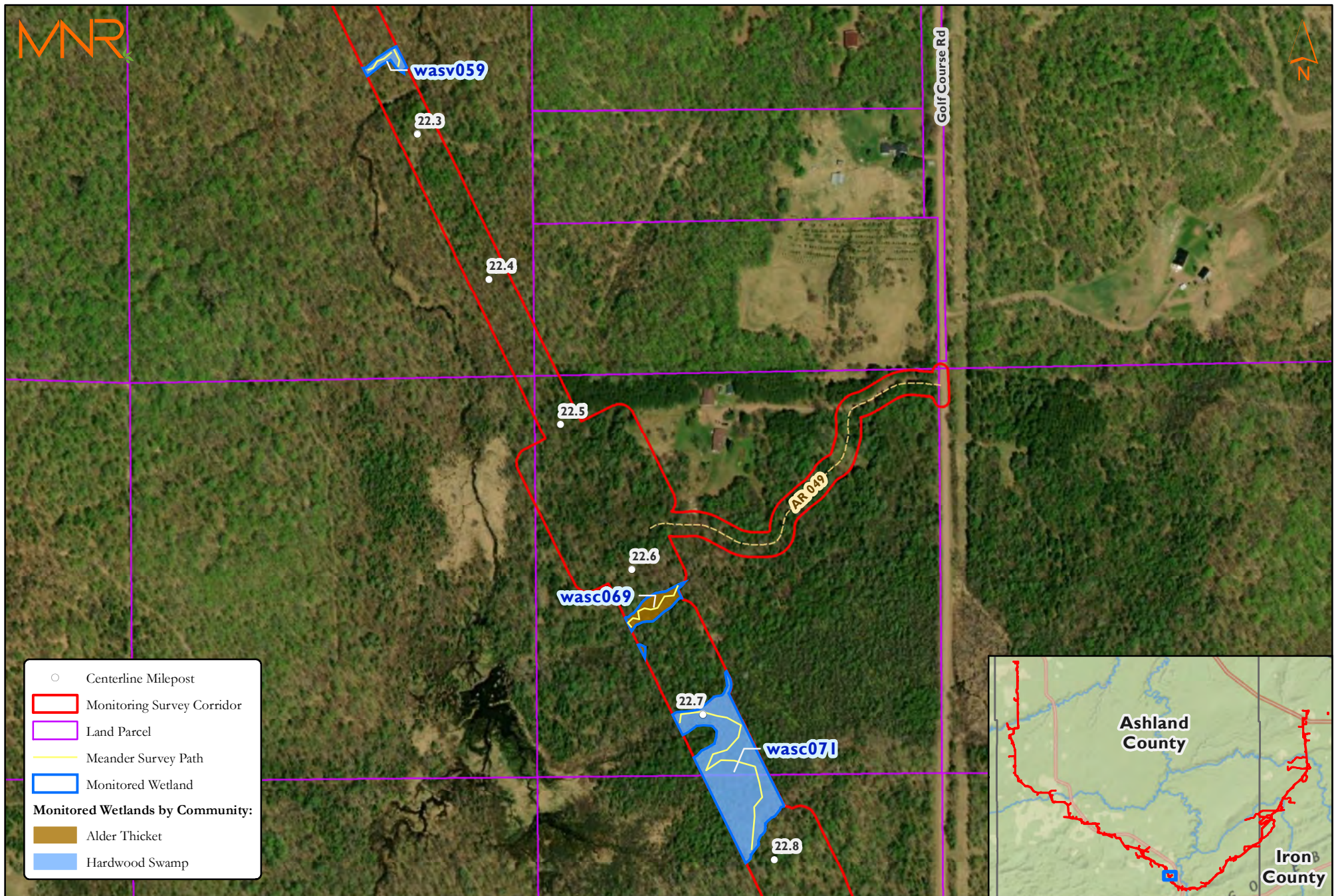


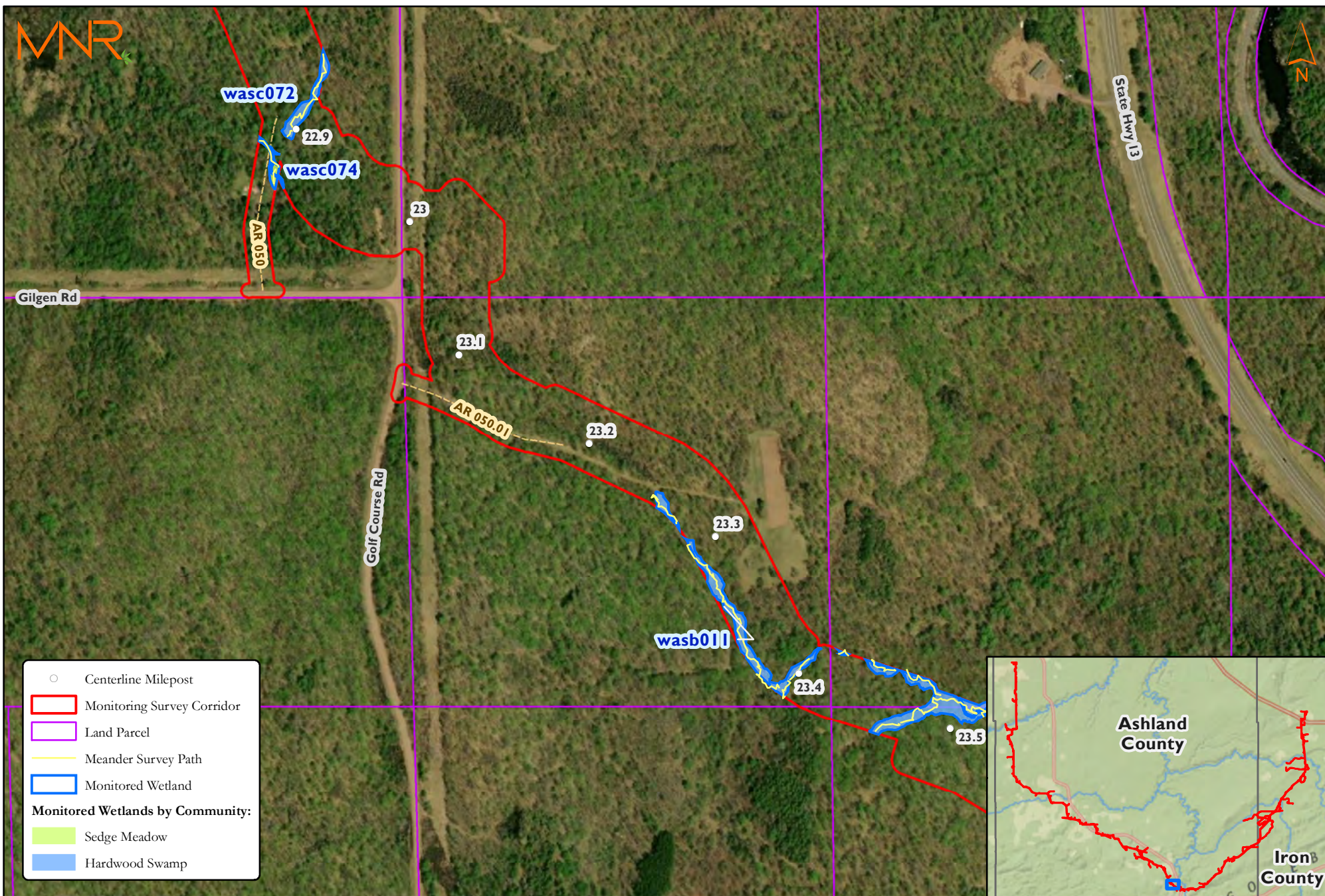
Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland County, Wisconsin

Map 11

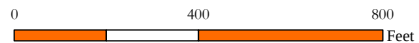


Surveyed High-Quality Wetlands
 High-Quality Wetlands Timed-Meander Survey Monitoring
 Line 5 Wisconsin Segment Relocation Project
 Enbridge Energy, L.P.
 Ashland County, Wisconsin





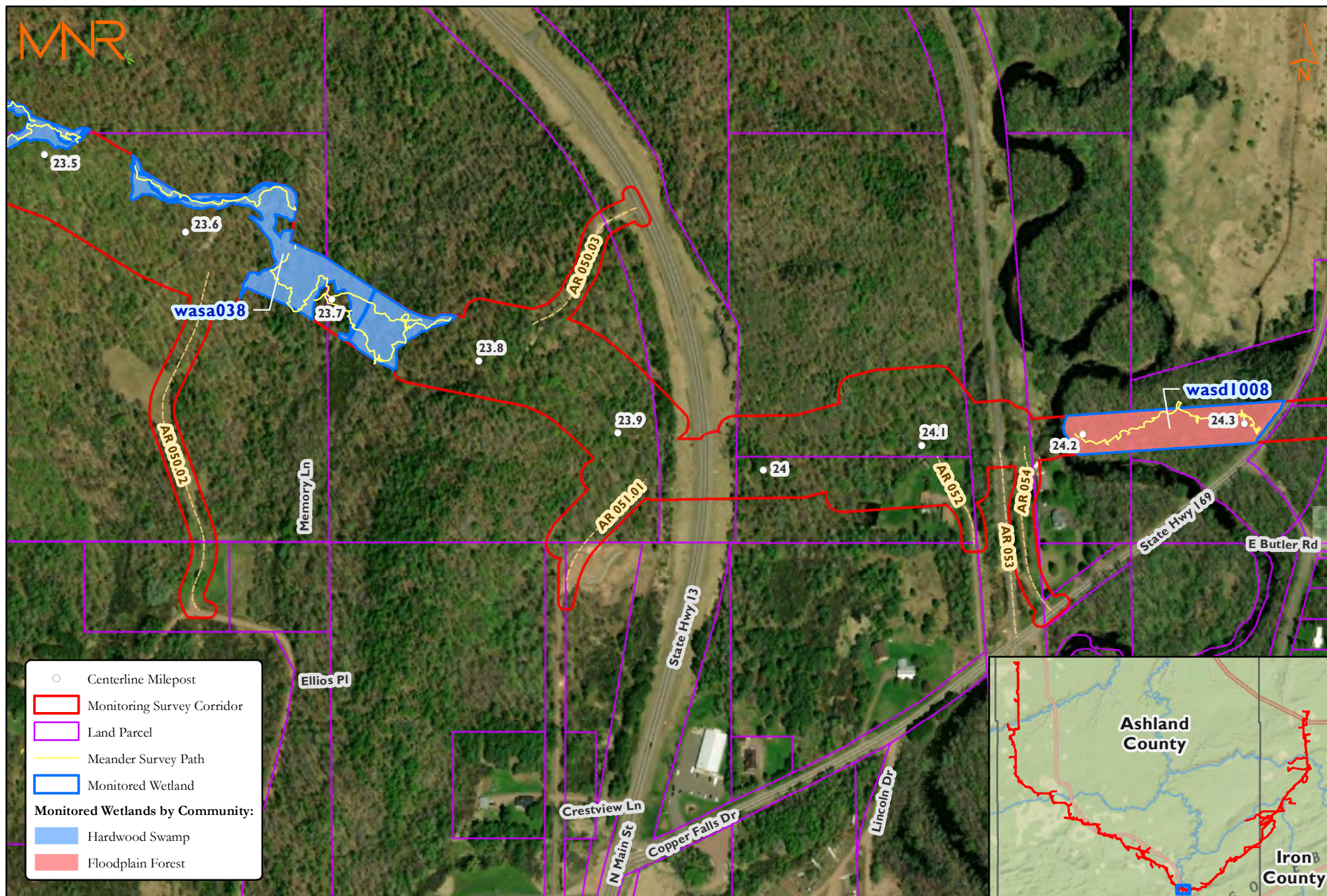
Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022



Surveyed High-Quality Wetlands
 High-Quality Wetlands Timed-Meander Survey Monitoring
 Line 5 Wisconsin Segment Relocation Project
 Enbridge Energy, L.P.
 Ashland County, Wisconsin

Map 14

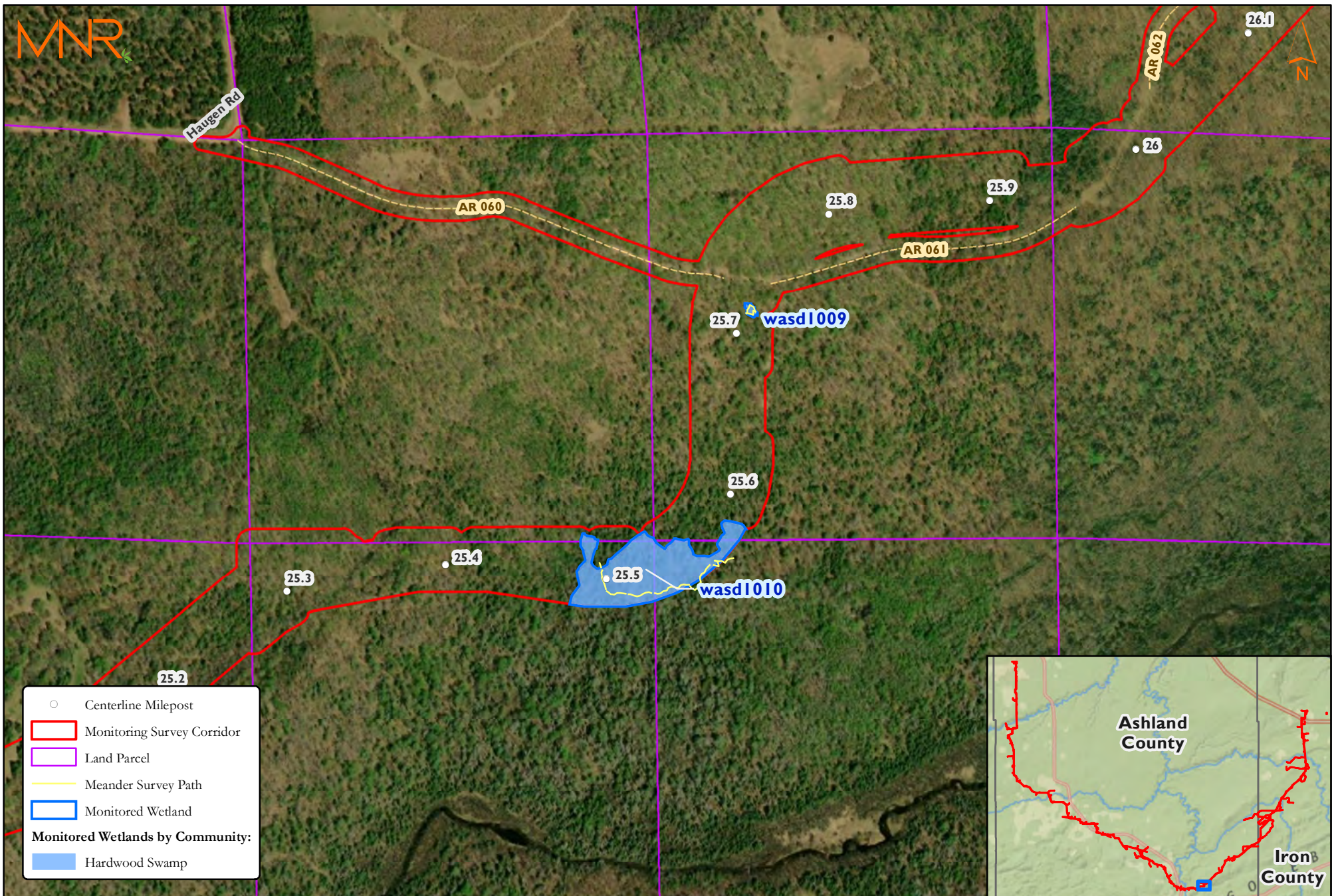
MNR



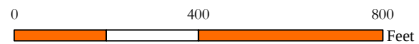
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Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland County, Wisconsin

Map 15

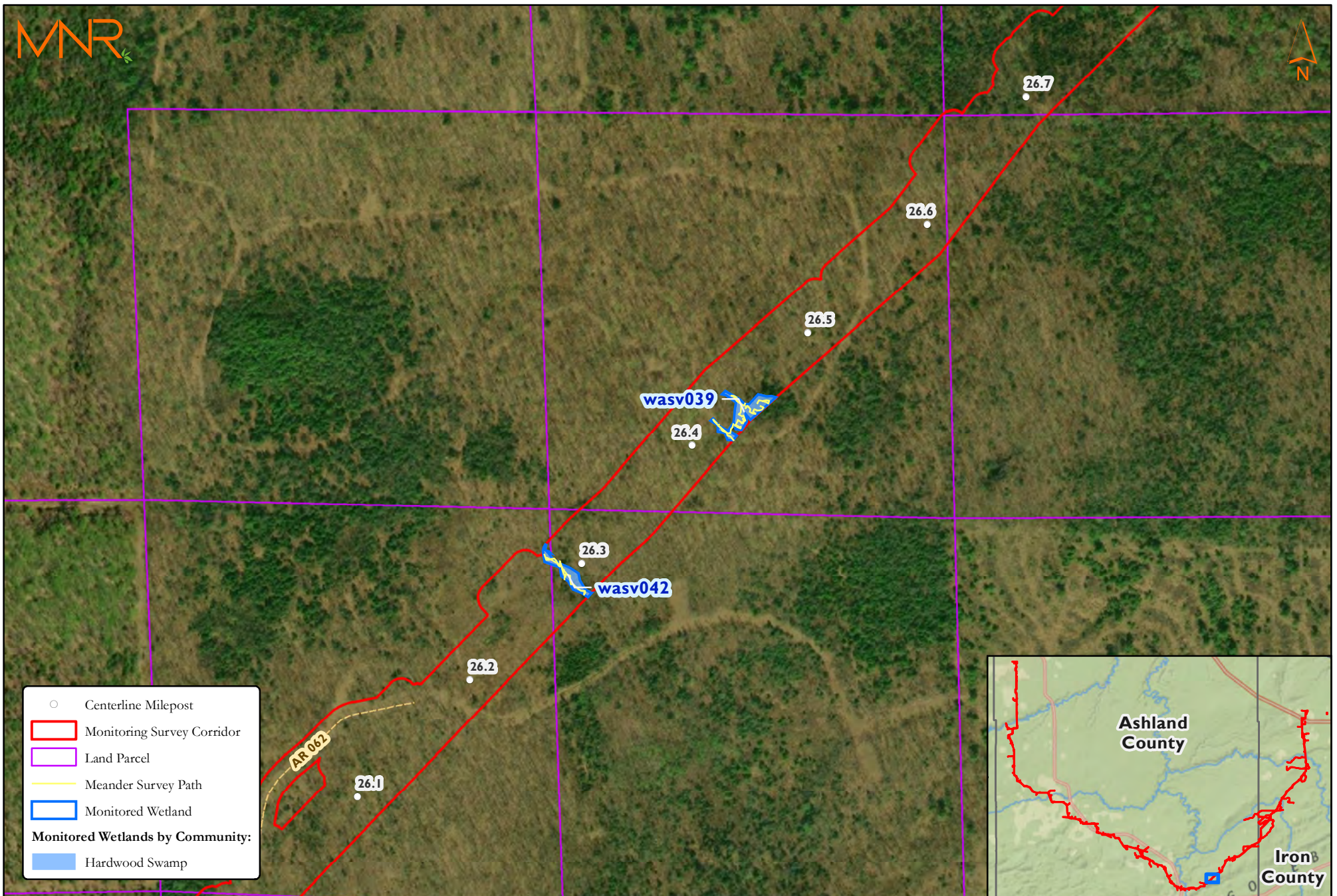


Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022



Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland County, Wisconsin

Map 16

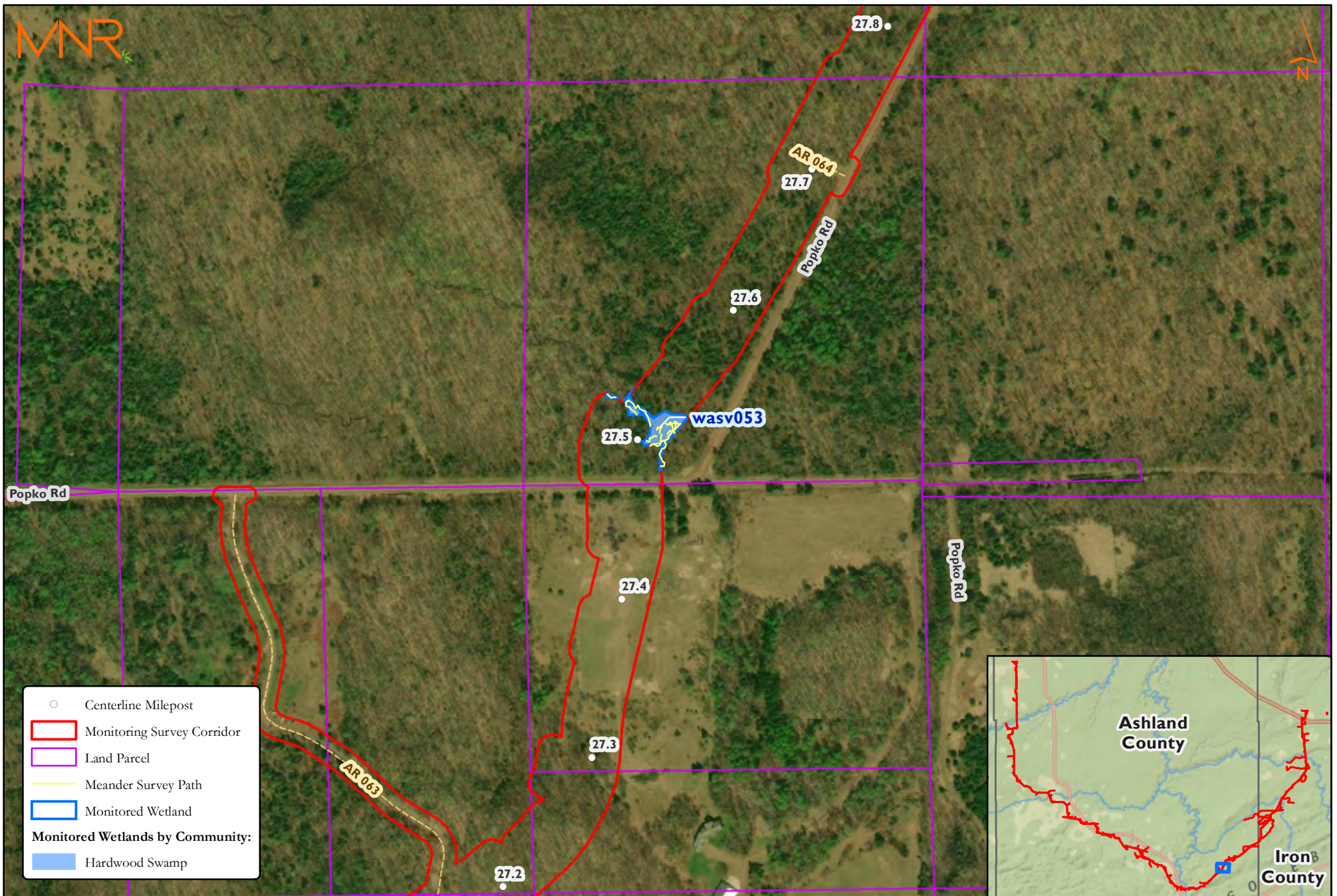


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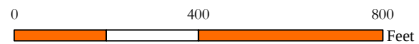
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Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland County, Wisconsin

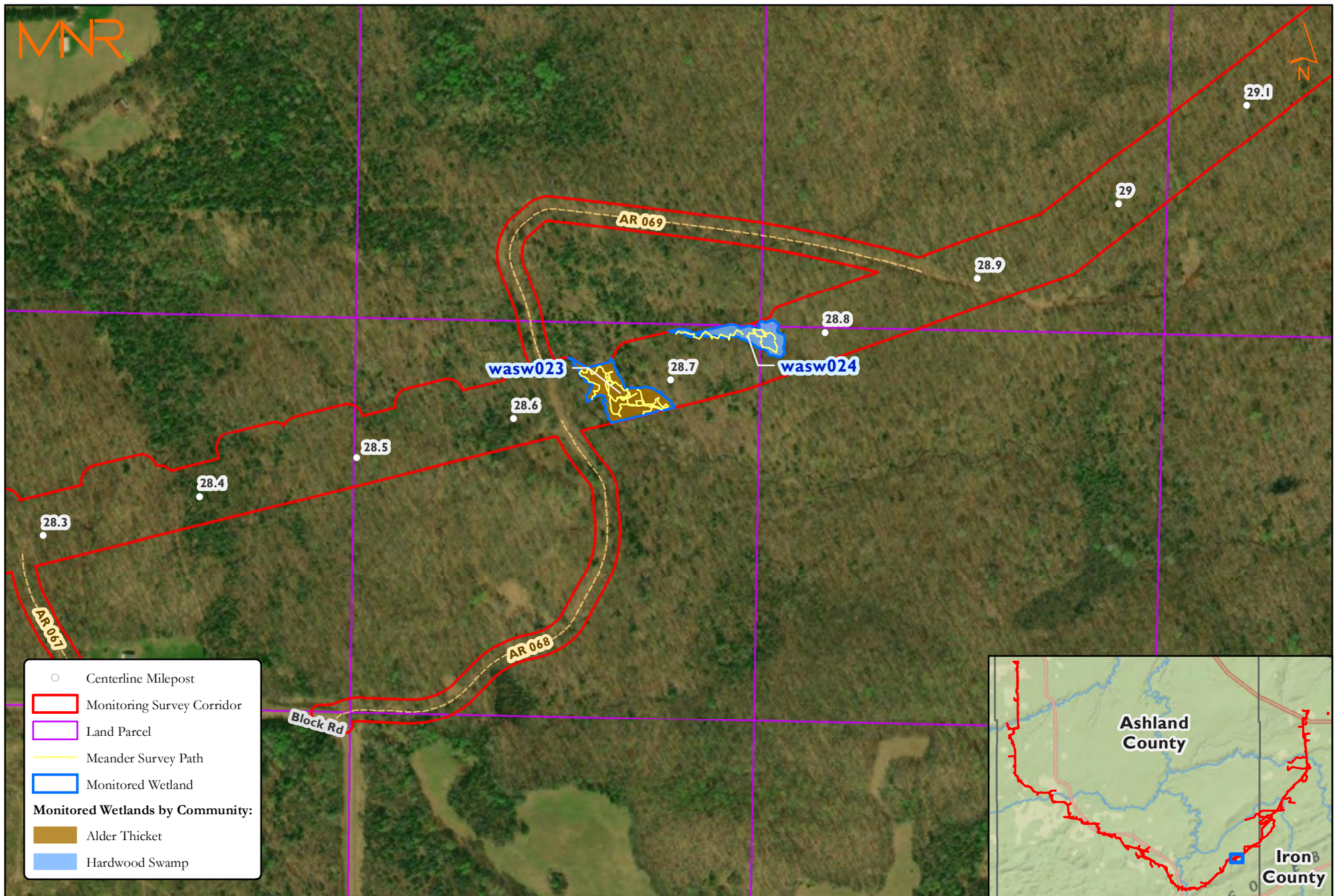
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Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022



Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland County, Wisconsin

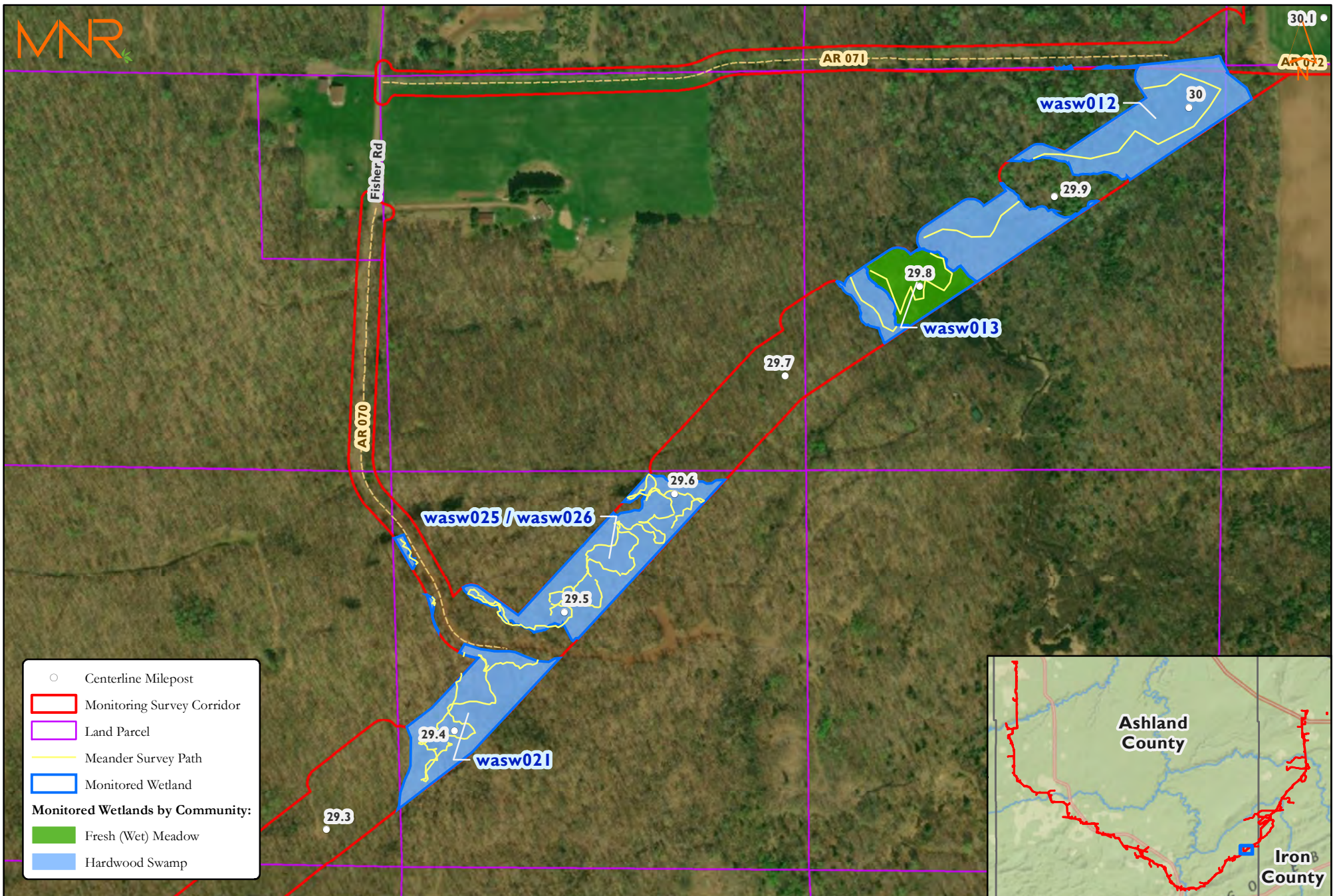


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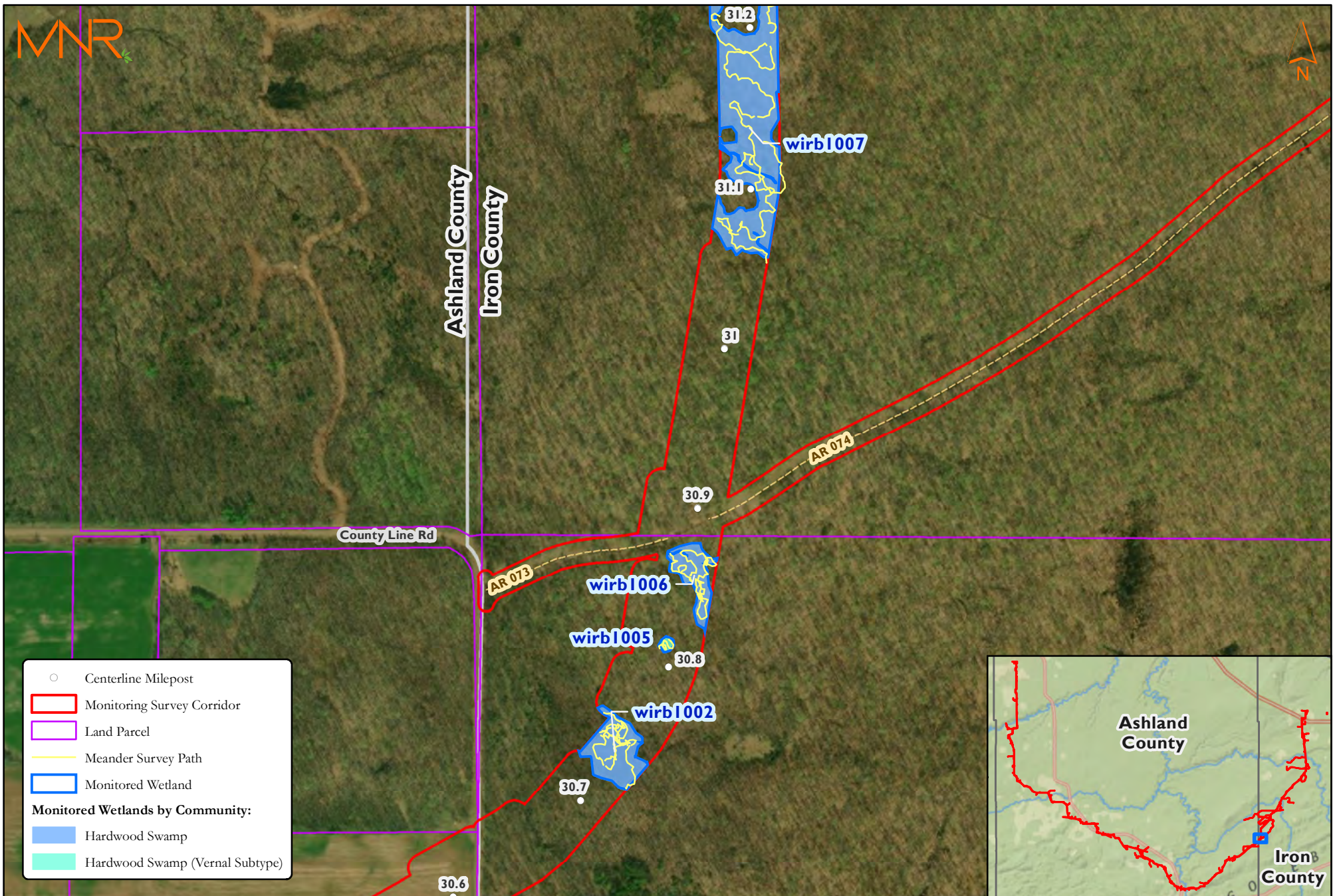
Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland County, Wisconsin

Map 19

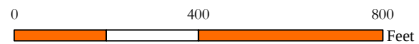


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Surveyed High-Quality Wetlands
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Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022



Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland / Iron counties, Wisconsin

Map 21

Ashland County
Iron County

- Centerline Milepost
 - ▭ Monitoring Survey Corridor
 - ▭ Land Parcel
 - Meander Survey Path
 - ▭ Monitored Wetland
- Monitored Wetlands by Community:**
- ▭ Fresh (Wet) Meadow
 - ▭ Hardwood Swamp

wirb1007

31.2

31.3

31.4

wirb009

31.5

31.6

31.7

wirb015

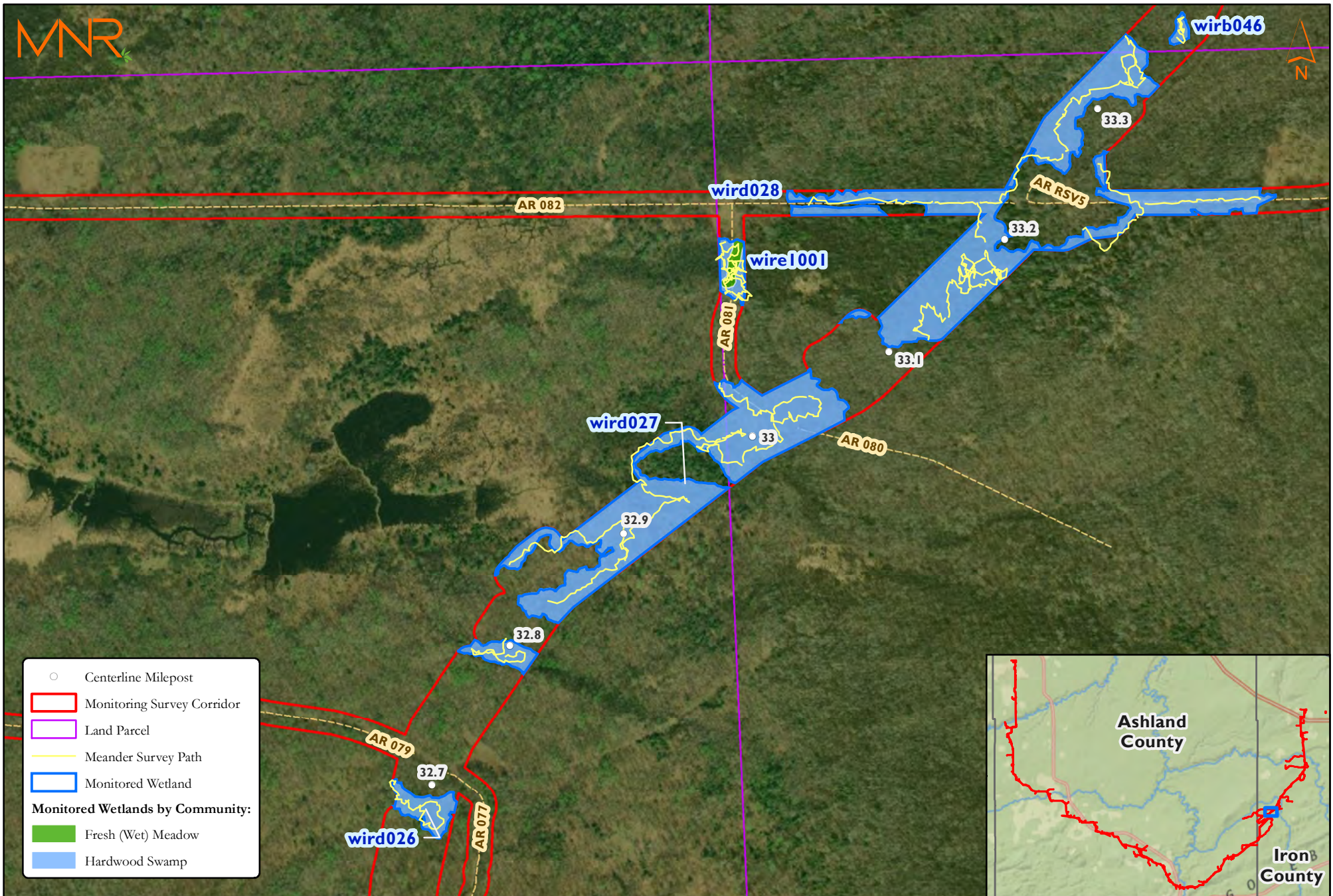
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0 400 800
Feet

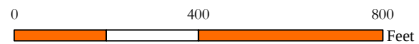
Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Ashland / Iron counties, Wisconsin



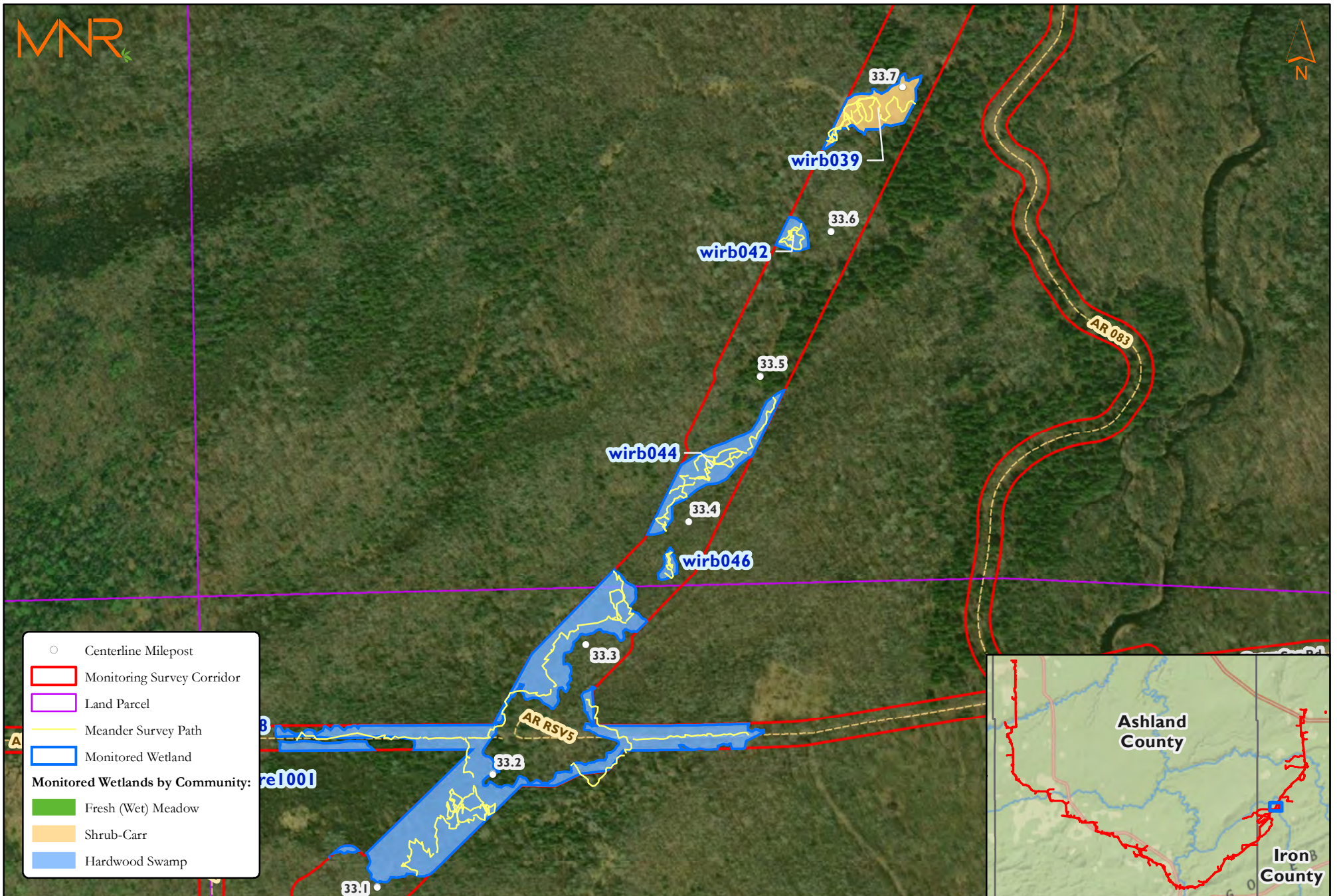
Map 22



Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022

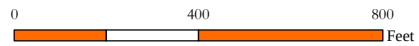


Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Iron County, Wisconsin



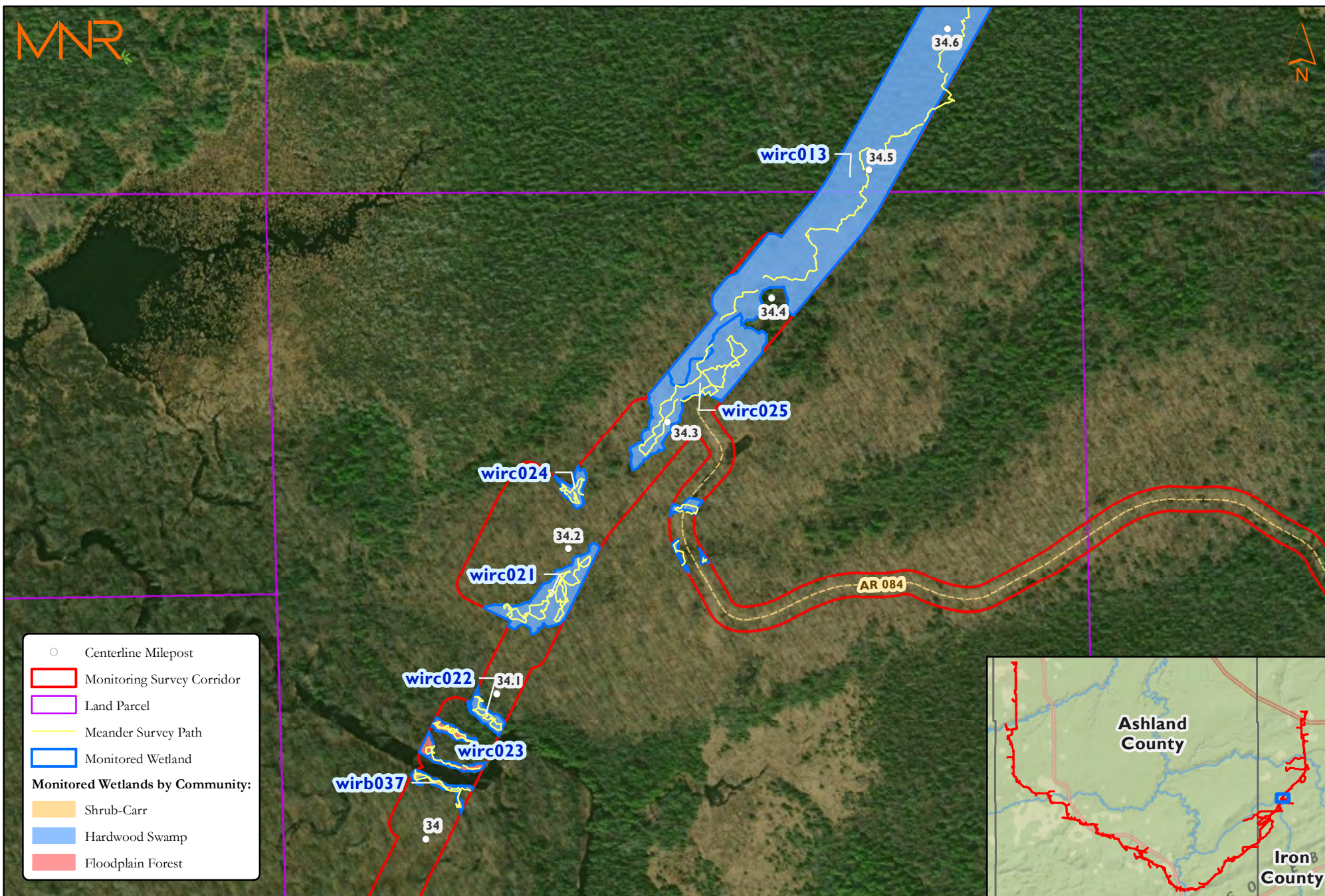
- Centerline Milepost
- ▭ Monitoring Survey Corridor
- ▭ Land Parcel
- Meander Survey Path
- ▭ Monitored Wetland
- Monitored Wetlands by Community:**
 - ▭ Fresh (Wet) Meadow
 - ▭ Shrub-Carr
 - ▭ Hardwood Swamp

Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022



Surveyed High-Quality Wetlands
 High-Quality Wetlands Timed-Meander Survey Monitoring
 Line 5 Wisconsin Segment Relocation Project
 Enbridge Energy, L.P.
 Iron County, Wisconsin

Map 24

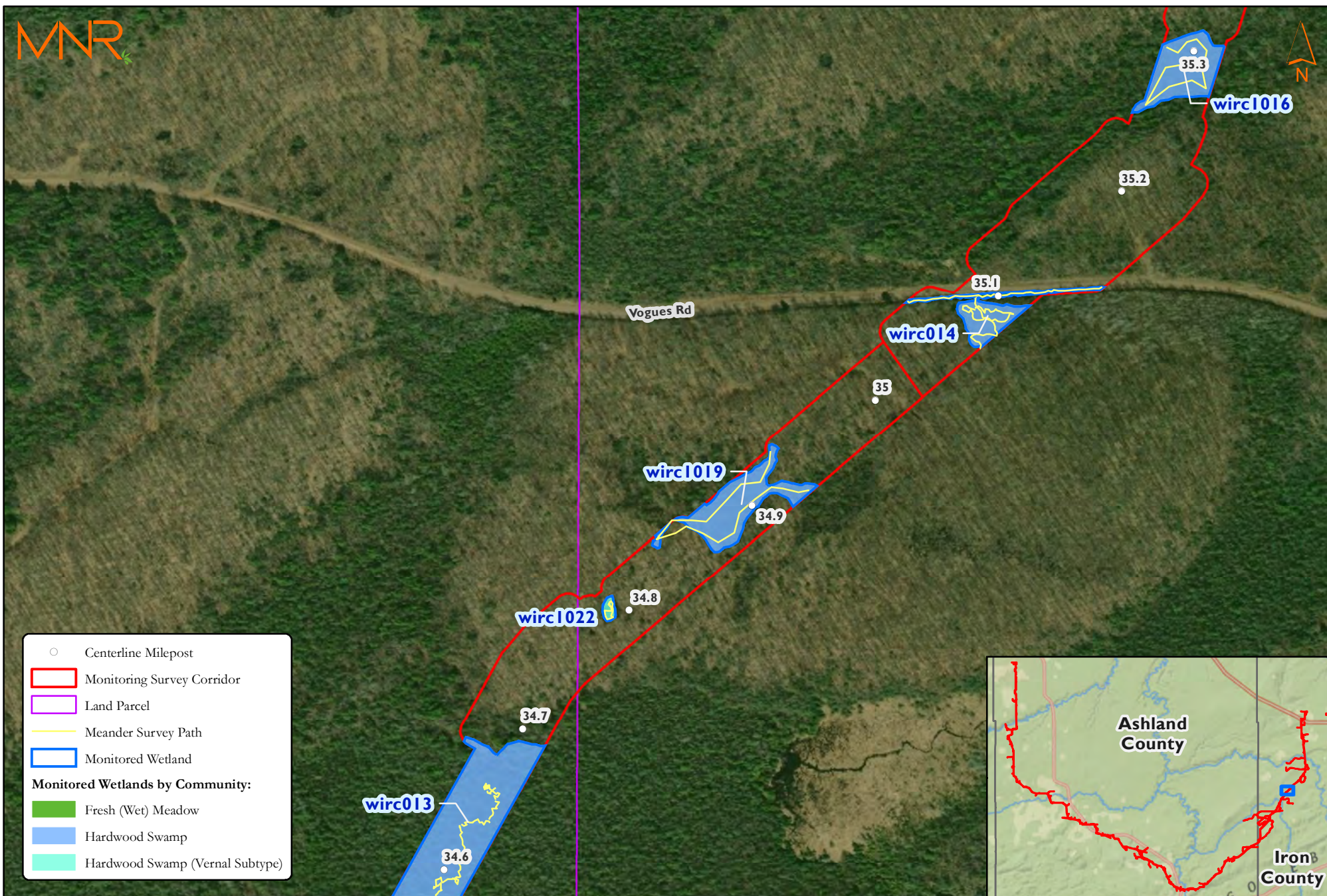


Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022

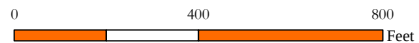
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Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Iron County, Wisconsin

Map 25



Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022



Surveyed High-Quality Wetlands
 High-Quality Wetlands Timed-Meander Survey Monitoring
 Line 5 Wisconsin Segment Relocation Project
 Enbridge Energy, L.P.
 Iron County, Wisconsin

Map 26

MNR

- Centerline Milepost
 - Monitoring Survey Corridor
 - Land Parcel
 - Meander Survey Path
 - Monitored Wetland
- Monitored Wetlands by Community:**
- Fresh (Wet) Meadow
 - Alder Thicket
 - Hardwood Swamp

wirc006

wira008

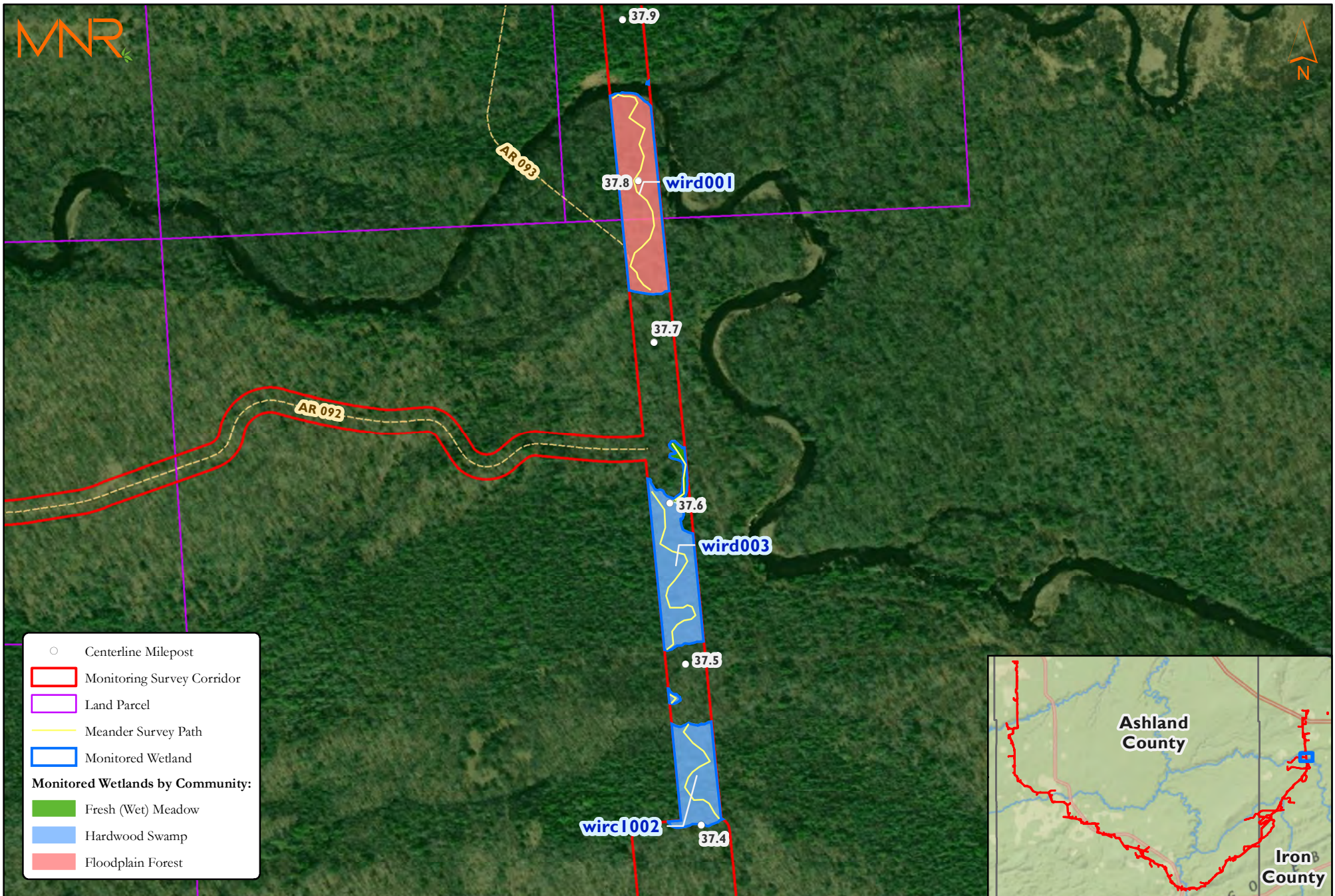
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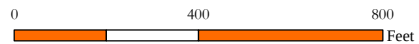
Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Iron County, Wisconsin



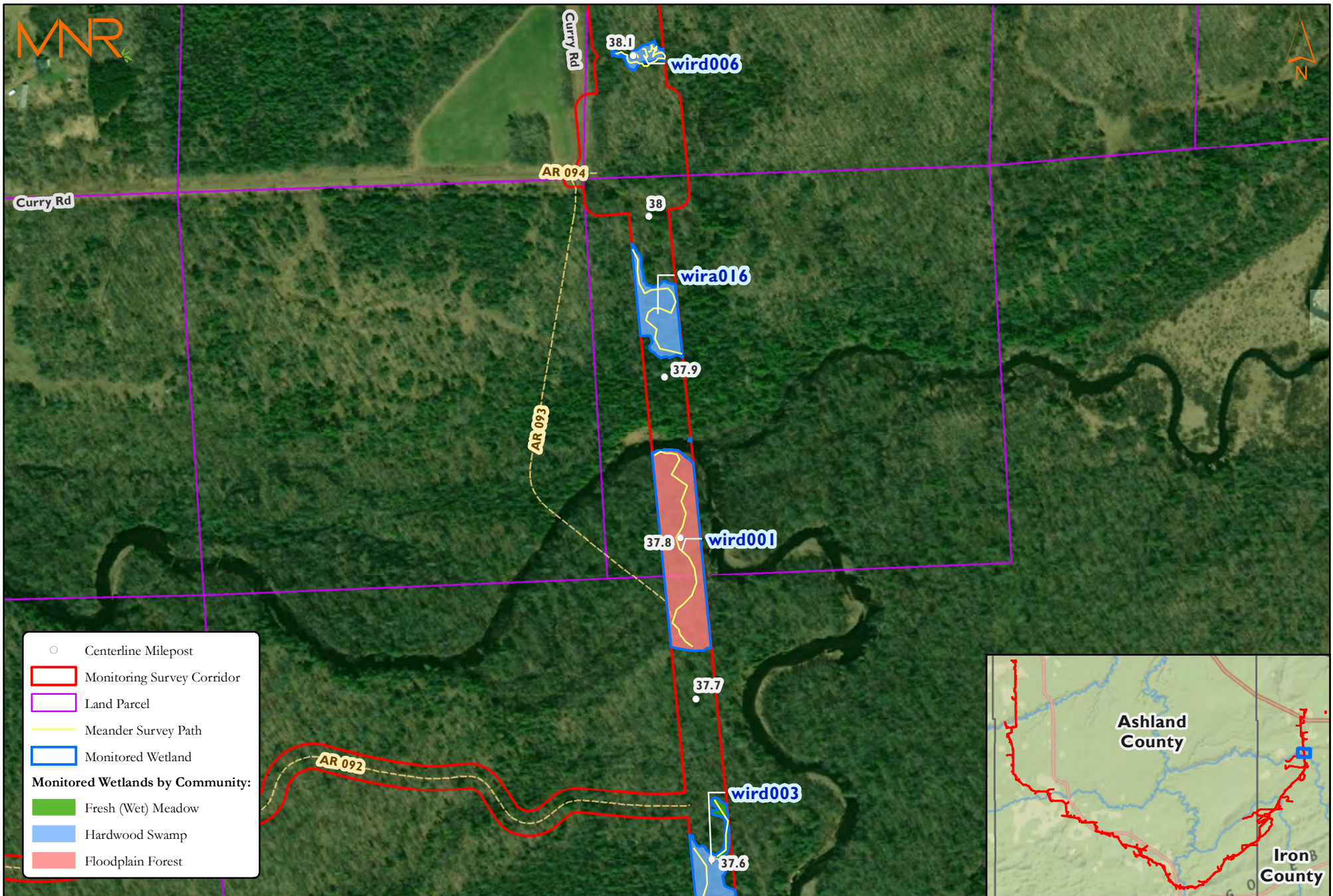
Map 27



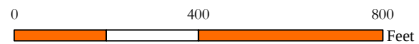
Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022



Surveyed High-Quality Wetlands
High-Quality Wetlands Timed-Meander Survey Monitoring
Line 5 Wisconsin Segment Relocation Project
Enbridge Energy, L.P.
Iron County, Wisconsin



Source: Esri World Imagery, National Geographic World Map, US Census Bureau, Date: 11/8/2022



Surveyed High-Quality Wetlands
 High-Quality Wetlands Timed-Meander Survey Monitoring
 Line 5 Wisconsin Segment Relocation Project
 Enbridge Energy, L.P.
 Iron County, Wisconsin

Appendix A – Surveyed Wetland Features



Wetland Feature	County	Feature Acreage	Nearest Milepost
wasb027f	Ashland	0.85	2.9
wasw002e/f	Ashland	8.84	3.1
wasw001f	Ashland	0.04	3.8
wasw1054f	Ashland	1.70	4.1
wasw059e	Ashland	0.06	5.9
wasw061e	Ashland	0.02	5.9
wasw062f	Ashland	0.34	6.0
wasw1016f	Ashland	4.65	10.6
wasw1006f	Ashland	1.60	14.2
wasw1033e/s	Ashland	0.40	14.7
wasw1014f	Ashland	0.41	15.9
wasw1041f	Ashland	1.53	16.6
wasw1045e/f	Ashland	0.40	16.8
wasw1004f	Ashland	0.25	17.2
wasw001e	Ashland	0.70	18.5
wasw1024e/f1/f2/s	Ashland	2.34	18.9
wasw1028f	Ashland	0.34	19.2
wasw139f_x	Ashland	1.48	20.2
wasw013f	Ashland	0.08	20.8
wasw019e/f	Ashland	2.58	21.3
wasw059f1	Ashland	0.12	22.3
wasw069s	Ashland	0.26	22.6
wasw071f	Ashland	1.94	22.7
wasw072f	Ashland	0.19	22.9
wasw074e	Ashland	0.06	22.9
wasw011f	Ashland	0.49	23.4
wasw038f	Ashland	3.60	23.7
wasw1008f	Ashland	1.97	24.2
wasw1010f	Ashland	1.86	25.5
wasw1009f	Ashland	0.03	25.7
wasw042f	Ashland	0.13	26.3
wasw039f	Ashland	0.21	26.4
wasw053f	Ashland	0.29	27.5
wasw023ss	Ashland	0.68	28.7
wasw024f	Ashland	0.37	28.8
wasw021f	Ashland	2.45	29.4
wasw025f/wasw026f	Ashland	3.04	29.5
wasw013ss	Ashland	1.21	29.8
wasw012f	Ashland	5.29	30.0
wirb1002f	Iron	0.74	30.7
wirb1005f	Iron	0.04	30.8
wirb1006f	Iron	0.47	30.9
wirb1007f	Iron	4.91	31.3
wirb009f_x	Iron	0.58	31.4
wirb015e	Iron	0.50	31.8
wirb026f	Iron	0.43	32.7

Wetland Feature	County	Feature Acreage	Nearest Milepost
wird027f	Iron	5.25	32.8
wire1001e/f	Iron	0.34	33.0
wird028f	Iron	5.95	33.2
wirb044f	Iron	0.93	33.4
wirb046f	Iron	0.09	33.4
wirb042f	Iron	0.18	33.6
wirb039s	Iron	0.70	33.7
wirb037s	Iron	0.09	34.0
wirc022f	Iron	0.14	34.1
wirc023f	Iron	0.20	34.1
wirc021f	Iron	0.89	34.2
wirc024f	Iron	0.14	34.2
wirc025f	Iron	1.48	34.3
wirc013f_x	Iron	7.62	34.5
wirc1022f	Iron	0.06	34.8
wirc1019f	Iron	1.11	34.9
wirc014e	Iron	0.12	35.1
wirc014f_x	Iron	0.44	35.1
wirc1016f	Iron	0.96	35.3
wirc006f	Iron	0.15	35.5
wira008f/s	Iron	0.78	35.9
wira008e/f_x	Iron	0.80	35.9
wirc1002f	Iron	1.00	37.4
wird003e/f	Iron	1.53	37.6
wird001f	Iron	1.93	37.8
wira016f	Iron	0.73	37.9
wird006f	Iron	0.16	38.1

Appendix B – General Condition Ratings



Sample Name	Natural Community	FQIa	FQIa Rating	Mean C	Mean C Rating	Nearest MP
wasb027f	Hardwood Swamp	34.1	Exceptional	4.10	Medium	2.9
wasm002e	Fresh (Wet) Meadow	28.7	High	4.66	High	3.1
wasm002f	Hardwood Swamp	41.8	Exceptional	4.64	High	3.1
wasm001f	Hardwood Swamp	24.6	High	4.50	High	3.8
wasal054f	Floodplain Forest	28.7	High	3.41	Medium	4.1
wasc059e	Vernal Pool	25.6	High	4.38	High	5.9
wasc061e	Vernal Pool	17.4	Medium	3.48	Medium	5.9
wasc062f	Hardwood Swamp	27.0	High	4.43	High	6.0
wase1016f	Hardwood Swamp	45.8	Exceptional	4.41	High	10.6
wasal006f	Hardwood Swamp	34.7	Exceptional	4.44	High	14.2
wasc1033e	Fresh (Wet) Meadow	14.6	Medium	2.33	Low	14.7
wasc1033s	Shrub-Carr	17.4	Medium	2.82	Medium	14.7
wasc1014f	Floodplain Forest	19.9	Medium	2.70	Medium	15.9
wasc1041f	Floodplain Forest	34.7	Exceptional	3.48	Medium	16.6
wasc1045e	Fresh (Wet) Meadow	28.1	High	3.94	Medium	16.8
wasc1045f	Floodplain Forest	34.4	Exceptional	5.02	Exceptional	16.8
wasb1004f	Hardwood Swamp	22.3	Medium	3.16	Medium	17.2
wase001e	Open Bog	33.6	Exceptional	5.45	Exceptional	18.5
wasd1024e	Fresh (Wet) Meadow	29.1	High	4.44	High	18.9
wasd1024f1	Hardwood Swamp	27.9	High	4.59	High	18.9
wasd1024f2	Coniferous Bog	41.1	Exceptional	6.76	Exceptional	18.9
wasd1024s	Open Bog	33.2	Exceptional	6.91	Exceptional	18.9
wasd1028f	Hardwood Swamp	36.3	Exceptional	5.35	Exceptional	19.2
wasal39f_x	Hardwood Swamp	35.8	Exceptional	4.79	Exceptional	20.2
wasv013f	Hardwood Swamp	34.2	Exceptional	4.78	Exceptional	20.8
wasv019e	Fresh (Wet) Meadow	24.7	High	3.11	Medium	21.3
wasv019f	Coniferous Swamp	37.1	Exceptional	4.96	Exceptional	21.3
wasv059f1	Hardwood Swamp	31.9	High	5.47	Exceptional	22.3
wasc069s	Alder Thicket	35.5	Exceptional	4.66	High	22.6
wasc071f	Hardwood Swamp	46.5	Exceptional	5.30	Exceptional	22.7
wasc072f	Hardwood Swamp	45.6	Exceptional	5.30	Exceptional	22.9
wasc074e	Hardwood Swamp	30.7	High	4.74	Exceptional	22.9
wasb011f	Hardwood Swamp	37.7	Exceptional	5.13	Exceptional	23.4
wasal038f	Hardwood Swamp	50.4	Exceptional	5.23	Exceptional	23.7
wasd1008f	Floodplain Forest	24.6	High	3.63	Medium	24.2
wasd1010f	Hardwood Swamp	27.1	High	3.50	Medium	25.5
wasd1009f	Hardwood Swamp	28.0	High	5.03	Exceptional	25.7
wasv042f	Hardwood Swamp	37.6	Exceptional	5.49	Exceptional	26.3
wasv039f	Hardwood Swamp	36.7	Exceptional	5.47	Exceptional	26.4
wasv053f	Hardwood Swamp	31.1	High	4.35	High	27.5
wasw023ss	Alder Thicket	36.8	Exceptional	4.68	High	28.7
wasw024f	Hardwood Swamp	37.2	Exceptional	5.22	Exceptional	28.8
wasw021f	Hardwood Swamp	35.0	Exceptional	5.00	Exceptional	29.4
wasw025f/wasw026f	Hardwood Swamp	41.4	Exceptional	4.94	Exceptional	29.5
wasw013ss	Alder Thicket	34.3	Exceptional	4.59	High	29.8
wasw012f	Hardwood Swamp	43.2	Exceptional	4.75	Exceptional	30.0

wirb1002f	Hardwood Swamp - Forested Seep	35.5	Exceptional	4.83	Exceptional	30.7
wirb1005f	Vernal Pool	15.5	Medium	4.31	High	30.8
wirb1006f	Hardwood Swamp	28.4	High	4.15	Medium	30.9
wirb1007f	Hardwood Swamp - Forested Seep	45.3	Exceptional	5.06	Exceptional	31.3
wirb009f_x	Hardwood Swamp	27.9	High	4.53	High	31.4
wirb015e	Fresh (Wet) Meadow	29.7	High	4.04	Medium	31.8
wird026f	Hardwood Swamp	38.2	Exceptional	4.89	Exceptional	32.7
wird027f	Hardwood Swamp	49.3	Exceptional	5.20	Exceptional	32.8
wire1001e	Fresh (Wet) Meadow	22.5	Medium	4.58	High	33.0
wire1001f	Hardwood Swamp	37.4	Exceptional	5.09	Exceptional	33.0
wird028f	Hardwood Swamp	47.6	Exceptional	5.04	Exceptional	33.2
wirb044f	Hardwood Swamp	38.2	Exceptional	5.02	Exceptional	33.4
wirb046f	Hardwood Swamp	28.5	High	4.97	Exceptional	33.4
wirb042f	Hardwood Swamp	37.1	Exceptional	5.59	Exceptional	33.6
wirb039s	Shrub-Carr	33.3	Exceptional	4.81	Exceptional	33.7
wirb037s	Shrub-Carr	33.8	Exceptional	4.47	High	34.0
wirc022f	Hardwood Swamp	30.4	High	4.48	High	34.1
wirc023f	Floodplain Forest	35.5	Exceptional	4.58	High	34.1
wirc021f	Hardwood Swamp	33.3	Exceptional	4.91	Exceptional	34.2
wirc024f	Hardwood Swamp	33.0	Exceptional	5.50	Exceptional	34.2
wirc025f	Hardwood Swamp	40.1	Exceptional	5.18	Exceptional	34.3
wirc013f_x	Coniferous Swamp	54.6	Exceptional	5.67	Exceptional	34.5
wirc1022f	Hardwood Swamp	19.2	Medium	4.19	Medium	34.8
wirc1019f	Hardwood Swamp	42.5	Exceptional	5.19	Exceptional	34.9
wirc014e	Fresh (Wet) Meadow	33.5	Exceptional	3.79	Medium	35.1
wirc014f_x	Hardwood Swamp	35.3	Exceptional	5.15	Exceptional	35.1
wirc1016f	Coniferous Swamp	41.6	Exceptional	5.47	Exceptional	35.3
wirc006f/wirc006f_x	Hardwood Swamp	28.9	High	4.45	High	35.5
wira008e_x	Fresh (Wet) Meadow	28.3	High	4.85	Exceptional	35.9
wira008f	Hardwood Swamp	36.1	Exceptional	4.74	Exceptional	35.9
wira008f_x	Coniferous Swamp	35.0	Exceptional	6.19	Exceptional	35.9
wira008s	Alder Thicket	32.2	Exceptional	4.46	High	35.9
wirc1002f	Coniferous Swamp	45.7	Exceptional	5.05	Exceptional	37.4
wird003e	Vernal Pool	31.8	High	4.64	High	37.6
wird003f	Coniferous Swamp	49.4	Exceptional	5.21	Exceptional	37.6
wird001f	Floodplain Forest	41.0	Exceptional	4.59	High	37.8
wira016f	Coniferous Swamp	38.6	Exceptional	5.46	Exceptional	37.9
wird006f	Hardwood Swamp	26.8	High	4.41	High	38.1

Appendix C – Condition Categories (NLFE)



Sample Name	Natural Community	Weighted Mean C	Condition Category - w(C)	Nearest MP
wasw013ss	Alder Thicket	3.9	Poor	29.8
wasc069s	Alder Thicket	4.4	Fair	22.6
wasw023ss	Alder Thicket	4.5	Good	28.7
wira008s	Alder Thicket	4.7	Good	35.9
wasd1024f2	Coniferous Bog	7.9	Good	18.9
wirc1002f	Coniferous Swamp	5.2	Fair to Very Poor	37.4
wirc1016f	Coniferous Swamp	5.4	Fair to Very Poor	35.3
wird003f	Coniferous Swamp	5.5	Fair to Very Poor	37.6
wira016f	Coniferous Swamp	5.6	Fair to Very Poor	37.9
wirc013f_x	Coniferous Swamp	5.9	Fair to Very Poor	34.5
wasv019f	Coniferous Swamp	6.1	Fair to Very Poor	21.3
wira008f_x	Coniferous Swamp	6.6	Fair to Very Poor	35.9
wasc1014f	Floodplain Forest ¹	2.9		15.9
wasd1008f	Floodplain Forest ¹	3.0		24.2
wasal054f	Floodplain Forest ¹	3.8		4.1
wasc1041f	Floodplain Forest ¹	3.9		16.6
wirc023f	Floodplain Forest ¹	4.2		34.1
wasc1045f	Floodplain Forest ¹	4.4		16.8
wird001f	Floodplain Forest ¹	4.7		37.8
wasc1033e	Fresh Meadow (Disturbed) ¹	2.9		14.7
wasv019e	Fresh Meadow (Disturbed) ¹	3.2		21.3
wirc014e	Fresh Meadow (Disturbed) ¹	3.8		35.1
wasc1045e	Fresh Meadow (Disturbed) ¹	4.3		16.8
wire1001e	Fresh Meadow (Native Subtype) ¹	3.1		33.0
wirb015e	Fresh Meadow (Native Subtype) ¹	4.0		31.8
wasd1024e	Fresh Meadow (Native Subtype) ¹	4.2		18.9
wira008e_x	Fresh Meadow (Native Subtype) ¹	4.6		35.9
wasm002e	Fresh Meadow (Native Subtype) ¹	4.8		3.1
wasc074e	Hardwood Swamp	3.0	Poor	22.9
wasb1004f	Hardwood Swamp	3.1	Poor	17.2
wasb027f	Hardwood Swamp	3.6	Poor	2.9
wirb009f_x	Hardwood Swamp	3.6	Poor	31.4
wasd1010f	Hardwood Swamp	3.7	Poor	25.5
wasd1024f1	Hardwood Swamp	3.9	Poor	18.9
wasm001f	Hardwood Swamp	4.1	Fair	3.8
wasv013f	Hardwood Swamp	4.1	Fair	20.8
wirc006f/wirc006f_x	Hardwood Swamp	4.2	Fair	35.5
wird006f	Hardwood Swamp	4.2	Fair	38.1
wirb1006f	Hardwood Swamp	4.2	Fair	30.9
wasm002f	Hardwood Swamp	4.2	Fair	3.1
wasw021f	Hardwood Swamp	4.4	Fair	29.4
wirc022f	Hardwood Swamp	4.5	Fair	34.1
wird026f	Hardwood Swamp	4.5	Fair	32.7
wasw025f/wasw026f	Hardwood Swamp	4.7	Fair	29.5
wase1016f	Hardwood Swamp	4.8	Fair	10.6
wirb046f	Hardwood Swamp	4.9	Fair	33.4
wira008f	Hardwood Swamp	5.0	Fair	35.9
wasal006f	Hardwood Swamp	5.2	Fair	14.2
wird027f	Hardwood Swamp	5.2	Fair	32.8
wasw012f	Hardwood Swamp	5.2	Fair	30.0
wirc1019f	Hardwood Swamp	5.3	Fair	34.9
wird028f	Hardwood Swamp	5.4	Fair	33.2
wasv053f	Hardwood Swamp	5.4	Fair	27.5
wasv059f1	Hardwood Swamp	5.5	Fair	22.3
wasal39f_x	Hardwood Swamp	5.5	Fair	20.2
wasc062f	Hardwood Swamp	5.5	Fair	6.0

wire021f	Hardwood Swamp	5.7	Good	34.2
wirc025f	Hardwood Swamp	5.7	Good	34.3
wasc072f	Hardwood Swamp	5.7	Good	22.9
wirb044f	Hardwood Swamp	5.8	Good	33.4
wirc1022f	Hardwood Swamp	5.9	Good	34.8
wire1001f	Hardwood Swamp	5.9	Good	33.0
was038f	Hardwood Swamp	6.0	Good	23.7
wasv042f	Hardwood Swamp	6.0	Good	26.3
wasc071f	Hardwood Swamp	6.0	Good	22.7
wirc014f x	Hardwood Swamp	6.1	Good	35.1
wasb011f	Hardwood Swamp	6.1	Good	23.4
wasd1009f	Hardwood Swamp	6.1	Good	25.7
wirb042f	Hardwood Swamp	6.2	Good	33.6
wasw024f	Hardwood Swamp	6.3	Excellent	28.8
wirc024f	Hardwood Swamp	6.4	Excellent	34.2
wasv039f	Hardwood Swamp	6.5	Excellent	26.4
wasd1028f	Hardwood Swamp	6.6	Excellent	19.2
wirb1007f	Hardwood Swamp - Forested Seep	5.7	Good	31.3
wirb1002f	Hardwood Swamp - Forested Seep	5.8	Good	30.7
wase001e	Open Bog	6.9	Fair to Very Poor	18.5
wasd1024s	Open Bog	8.2	Good	18.9
wasc1033s	Shrub-Carr	3.0	Very Poor	14.7
wirb037s	Shrub-Carr	4.7	Poor	34.0
wirb039s	Shrub-Carr	5.0	Poor	33.7
wasc061e	Vernal Pool ¹	3.6		5.9
wasc059e	Vernal Pool ¹	3.7		5.9
wird003e	Vernal Pool ¹	5.0		37.6
wirb1005f	Vernal Pool ¹	6.5		30.8

¹ - The community in this region has not been assigned a Condition Category

Appendix D – Wetland Species Lists/FQA Metrics



Sample Name	Crew	Date	Latitude	Longitude
wasb027f	SAM/IGL	2022-08-22	46.519349	-90.895202
Wetland Name		Community Type		
wasb027		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
281		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
36.535	31.818	4.717	4.108
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
34.069	29.871	4.101	3.596

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Populus tremuloides</i>	quaking aspen	62.5	2	N
<i>Alnus incana subsp. rugosa</i>	speckled alder	15	4	N
<i>Calamagrostis canadensis</i>	bluejoint	15	5	N
<i>Carex lacustris</i>	lake sedge	15	6	N
<i>Rhamnus cathartica</i>	common buckthorn	15	0	I
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Agrostis stolonifera</i>	spreading bentgrass	2.5	0	I
<i>Symphyotrichum lanceolatum</i>	eastern lined aster	2.5	4	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina var. angustum</i>	lady fern	2.5	5	N
<i>Betula papyrifera</i>	canoe birch	2.5	3	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex crinita var. crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex interior</i>	interior sedge	2.5	7	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Carex tenera</i>	marsh straw sedge	2.5	4	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Cornus racemosa</i>	gray dogwood	2.5	2	N

<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Epilobium ciliatum</i>	American willow-herb	2.5	3	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Frangula alnus</i>	glossy buckthorn	2.5	0	I
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Gaultheria procumbens</i>	wintergreen	2.5	6	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Hieracium caespitosum</i>	meadow hawkweed	2.5	0	I
<i>Hieracium umbellatum</i>	Canada hawkweed	2.5	5	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Lysimachia ciliata</i>	fringed loosestrife	2.5	5	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Phleum pratense</i> subsp. <i>pratense</i>	timothy	2.5	0	I
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Poa pratensis</i> subsp. <i>pratensis</i>	Kentucky bluegrass	2.5	0	I
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Potentilla simplex</i>	oldfield cinquefoil	2.5	2	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Ribes hirtellum</i>	swamp gooseberry	2.5	6	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Salix bebbiana</i>	Bebb's willow	2.5	7	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Solidago uliginosa</i>	bog goldenrod	2.5	8	N
<i>Spiraea alba</i> var. <i>alba</i>	white meadowsweet	2.5	4	N
<i>Stachys palustris</i>	woundwort	2.5	5	N

<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Thelypteris palustris</i>	northern marsh fern	2.5	7	N
<i>Vaccinium myrtilloides</i>	velvet-leaved blueberry	2.5	6	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Viburnum lentago</i>	nannyberry	2.5	4	N
<i>Viburnum rafinesquianum</i>	downy arrowwood	2.5	7	N
<i>Ulmus americana</i>	American elm	1	3	N

Sample Name	Crew	Date	Latitude	Longitude
wasm002f	SAM/IGL	2022-08-23	46.515896	-90.895174
Wetland Name		Community Type		
wasm002		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
287		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
43.422	40.555	5.082	4.747
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
41.779	37.978	4.638	4.246

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer rubrum</i>	red maple	15	3	N
<i>Calamagrostis canadensis</i>	bluejoint	15	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Carex lacustris</i>	lake sedge	15	6	N
<i>Cornus racemosa</i>	gray dogwood	15	2	N
<i>Frangula alnus</i>	glossy buckthorn	15	0	I
<i>Populus tremuloides</i>	quaking aspen	15	2	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Agrostis gigantea</i>	redtop	2.5	0	I
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Symphyotrichum lanceolatum</i>	eastern lined aster	2.5	4	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex castanea</i>	chestnut-colored sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex lupulina</i>	hop umbrella sedge	2.5	6	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex retrorsa</i>	retrorse sedge	2.5	6	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Carex tenera</i>	marsh straw sedge	2.5	4	N

<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Cicuta maculata</i>	common water-hemlock	2.5	6	N
<i>Cirsium arvense</i>	Canada thistle	2.5	0	I
<i>Comarum palustre</i>	marsh cinquefoil	2.5	8	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria canadensis</i> var. <i>canadensis</i>	rattlesnake grass	2.5	7	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Hieracium umbellatum</i>	Canada hawkweed	2.5	5	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Larix laricina</i>	tamarack	2.5	8	N
<i>Lysimachia thyrsiflora</i>	tufted loosestrife	2.5	7	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mentha arvensis</i> var. <i>canadensis</i>	common mint	2.5	3	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Penthorum sedoides</i>	ditch stonecrop	2.5	3	N
<i>Phleum pratense</i> subsp. <i>pratense</i>	timothy	2.5	0	I
<i>Pinus strobus</i>	white pine	2.5	5	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Potentilla simplex</i>	oldfield cinquefoil	2.5	2	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Quercus macrocarpa</i> var. <i>macrocarpa</i>	bur oak	2.5	5	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Rhamnus cathartica</i>	common buckthorn	2.5	0	I
<i>Ribes hirtellum</i>	swamp gooseberry	2.5	6	N

<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rumex britannica</i>	great water dock	2.5	8	N
<i>Salix petiolaris</i>	slender willow	2.5	6	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scutellaria galericulata</i>	marsh skullcap	2.5	5	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Sium suave</i>	water parsnip	2.5	5	N
<i>Maianthemum trifolium</i>	false mayflower	2.5	10	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Spiraea alba</i> var. <i>alba</i>	white meadowsweet	2.5	4	N
<i>Toxicodendron rydbergii</i>	western poison ivy	2.5	2	N
<i>Trientalis borealis</i> subsp. <i>borealis</i>	American starflower	2.5	7	N
<i>Vaccinium myrtilloides</i>	velvet-leaved blueberry	2.5	6	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Waldsteinia fragarioides</i>	barren-strawberry	2.5	6	N
<i>Fraxinus nigra</i>	black ash	1	8	N
<i>Prenanthes alba</i>	white rattlesnakeroot	1	8	N

Sample Name	Crew	Date	Latitude	Longitude
wasm002e	SAM/IGL	2022-08-22	46.516123	-90.895057
Wetland Name		Community Type		
wasm002		Fresh Meadow (Native Subtype)		
Total % Cover		Total % Non-Native Cover		
238.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
29.918	2.016	5.057	0.341
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
28.713	29.478	4.658	4.782

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Calamagrostis canadensis</i>	bluejoint	62.5	5	N
<i>Carex lacustris</i>	lake sedge	62.5	6	N
<i>Phalaris arundinacea</i>	reed canary grass	15	0	I
<i>Scirpus cyperinus</i>	wool-grass	15	4	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Symphyotrichum lanceolatum</i>	eastern lined aster	2.5	4	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Cirsium arvense</i>	Canada thistle	2.5	0	I
<i>Comarum palustre</i>	marsh cinquefoil	2.5	8	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Epilobium strictum</i>	downy willow herb	2.5	10	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Lycopus americanus</i>	cut-leaved bugleweed	2.5	4	N

<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Mentha arvensis</i> var. <i>canadensis</i>	common mint	2.5	3	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ribes hirtellum</i>	swamp gooseberry	2.5	6	N
<i>Salix petiolaris</i>	slender willow	2.5	6	N
<i>Salix pyrifolia</i>	balsam willow	2.5	7	N
<i>Solidago canadensis</i>	Canadian goldenrod	2.5	1	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Spiraea alba</i> var. <i>alba</i>	white meadowsweet	2.5	4	N
<i>Triadenum fraseri</i>	marsh St. John's wort	2.5	8	N
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Rumex britannica</i>	great water dock	1	8	N

Sample Name	Crew	Date	Latitude	Longitude
wasm001f	SAM/IGL	2022-08-23	46.505962	-90.89445
Wetland Name		Community Type		
wasm001		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
162		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
25.069	1.067	4.655	0.198
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
24.648	22.416	4.500	4.093

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Corylus cornuta</i>	beaked hazelnut	37.5	5	N
<i>Populus tremuloides</i>	quaking aspen	37.5	2	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Rubus pubescens</i>	dwarf raspberry	15	7	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex lacustris</i>	lake sedge	2.5	6	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Cornus racemosa</i>	gray dogwood	2.5	2	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Quercus macrocarpa</i> var. <i>macrocarpa</i>	bur oak	2.5	5	N
<i>Ribes hirtellum</i>	swamp gooseberry	2.5	6	N

<i>Rosa acicularis</i>	prickly rose	2.5	6	N
<i>Toxicodendron rydbergii</i>	western poison ivy	2.5	2	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	1	6	N
<i>Viburnum rafinesquianum</i>	downy arrowwood	1	7	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	0	5	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	0	5	N

Sample Name	Crew	Date	Latitude	Longitude
was1054f	SAM/IGL	2022-08-31	46.500299	-90.894283
Wetland Name		Community Type		
was1054		Floodplain Forest		
Total % Cover		Total % Non-Native Cover		
331.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
31.242	2.757	4.033	0.356
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
28.720	32.065	3.408	3.805

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	37.5	8	N
<i>Fraxinus pennsylvanica</i>	green ash	37.5	2	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	37.5	5	N
<i>Acer negundo</i>	box elder	15	0	N
<i>Carex bromoides</i>	brome-like sedge	15	8	N
<i>Laportea canadensis</i>	woodnettle	15	4	N
<i>Rhamnus cathartica</i>	common buckthorn	15	0	I
<i>Vitis riparia</i>	wild grape	15	2	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Alnus incana subsp. rugosa</i>	speckled alder	2.5	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Bidens cernua</i>	nodding bur-marigold	2.5	4	N
<i>Boehmeria cylindrica</i>	false nettle	2.5	6	N
<i>Carex crinita var. crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex radiata</i>	eastern star sedge	2.5	4	N
<i>Carex retrorsa</i>	retorse sedge	2.5	6	N
<i>Cicuta maculata</i>	common water-hemlock	2.5	6	N
<i>Cirsium arvense</i>	Canada thistle	2.5	0	I
<i>Cirsium vulgare</i>	bull thistle	2.5	0	I

<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Echinocystis lobata</i>	wild cucumber	2.5	2	N
<i>Elymus virginicus</i> var. <i>virginicus</i>	common eastern wild-rye	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum hyemale</i> subsp. <i>affine</i>	common scouring rush	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Erigeron annuus</i>	annual fleabane	2.5	0	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Geum canadense</i>	white avens	2.5	2	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Heracleum lanatum</i>	cow parsnip	2.5	3	N
<i>Humulus lupulus</i>	common hops	2.5	3	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lapsana communis</i>	nipplewort	2.5	0	I
<i>Lemna minor</i>	common duckweed	2.5	4	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Melilotus alba</i>	white sweet clover	2.5	0	I
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Pilea fontana</i>	black-fruited clearweed	2.5	7	N
<i>Pinus strobus</i>	white pine	2.5	5	N
<i>Plantago major</i>	common plantain	2.5	0	I
<i>Potentilla norvegica</i>	rough cinquefoil	2.5	0	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes americanum</i>	wild black currant	2.5	4	N
<i>Ribes cynosbati</i>	prickly gooseberry	2.5	3	N
<i>Micranthes pensylvanica</i>	eastern swamp saxifrage	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Stachys palustris</i>	woundwort	2.5	5	N
<i>Tanacetum vulgare</i>	tansy	2.5	0	I
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Urtica dioica</i> subsp. <i>gracilis</i>	stinging nettle	2.5	0	I
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Viola sororia</i>	door-yard violet	2.5	3	N
<i>Achillea millefolium</i>	common yarrow	1	1	N

<i>Arctium minus</i>	common burdock	1	0	I
<i>Asclepias incarnata</i>	swamp milkweed	1	5	N
<i>Bromus ciliatus</i>	fringed brome	1	7	N
<i>Caulophyllum thalictroides</i>	blue cohosh	1	8	N
<i>Erechtites hieracifolia</i> var. <i>hieracifolia</i>	American burn-weed	1	2	N
<i>Oenothera biennis</i>	bastard evening-primrose	1	1	N
<i>Tilia americana</i>	American basswood	1	5	N
<i>Verbascum thapsus</i>	common mullein	1	0	I

Sample Name	Crew	Date	Latitude	Longitude
wasc059e	SAM/IGL	2022-08-23	46.481739	-90.902932
Wetland Name		Community Type		
wasc059		Hardwood Swamp (Vernal Pool Subtype)		
Total % Cover		Total % Non-Native Cover		
154.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
25.938	0.968	4.515	0.169
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
25.553	21.286	4.382	3.650

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer rubrum</i>	red maple	62.5	3	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Cornus racemosa</i>	gray dogwood	2.5	2	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N

<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Ribes hirtellum</i>	swamp gooseberry	2.5	6	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago canadensis</i>	Canadian goldenrod	2.5	1	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Rosa acicularis</i>	prickly rose	1	6	N
<i>Ulmus americana</i>	American elm	1	3	N

Sample Name	Crew	Date	Latitude	Longitude
wasc061e	SAM/IGL	2022-08-23	46.481103	-90.903034
Wetland Name		Community Type		
wasc061		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
106.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
18.985	0.524	4.143	0.114
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
17.400	17.958	3.480	3.592

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	15	3	N
<i>Carex gracillima</i>	graceful sedge	15	5	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Galium triflorum</i>	fragrant bedstraw	15	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Cornus racemosa</i>	gray dogwood	2.5	2	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Rosa acicularis</i>	prickly rose	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Abies balsamea</i>	balsam fir	1	5	N
<i>Cerastium fontanum</i> subsp. <i>vulgare</i>	mouse-ear chickweed	1	0	I
<i>Epilobium coloratum</i>	purple-leaved willow herb	1	3	N

<i>Picea glauca</i>	white spruce	1	7	N
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Sample Name	Crew	Date	Latitude	Longitude
wasc062f	SAM/IGL	2022-08-23	46.480073	-90.9022
Wetland Name		Community Type		
wasc062		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
187		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
27.333	1.860	4.556	0.310
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
26.961	33.748	4.432	5.548

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Populus tremuloides</i>	quaking aspen	15	2	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Cornus racemosa</i>	gray dogwood	2.5	2	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N

<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Rhamnus cathartica</i>	common buckthorn	2.5	0	I
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Lactuca biennis</i>	biennial blue lettuce	1	3	N
<i>Viburnum rafinesquianum</i>	downy arrowwood	1	7	N

Sample Name	Crew	Date	Latitude	Longitude
wase1016f	EJO/MJF	2022-08-23	46.430542	-90.855162
Wetland Name		Community Type		
wase1016		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
390		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
47.840	5.581	4.808	0.561
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
45.803	50.030	4.407	4.814

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	37.5	8	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Calamagrostis canadensis</i>	bluejoint	15	5	N
<i>Carex intumescens</i>	bladder sedge	15	5	N
<i>Corylus cornuta</i>	beaked hazelnut	15	5	N
<i>Pinus strobus</i>	white pine	15	5	N
<i>Rubus pubescens</i>	dwarf raspberry	15	7	N
<i>Viburnum lentago</i>	nannyberry	15	4	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Alnus incana subsp. rugosa</i>	speckled alder	2.5	4	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum firmum</i>	shining aster	2.5	6	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina var. angustum</i>	lady fern	2.5	5	N
<i>Betula papyrifera</i>	canoe birch	2.5	3	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex crinita var. crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N

<i>Carex lacustris</i>	lake sedge	2.5	6	N
<i>Carex leptalea</i> subsp. <i>leptalea</i>	slender sedge	2.5	9	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex retrorsa</i>	retrorse sedge	2.5	6	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Carex tenera</i>	marsh straw sedge	2.5	4	N
<i>Carex tuckermanii</i>	Tuckerman's sedge	2.5	8	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Cirsium vulgare</i>	bull thistle	2.5	0	I
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Coptis trifolia</i>	three-leaved gold-thread	2.5	8	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Cornus racemosa</i>	gray dogwood	2.5	2	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Corylus americana</i>	American hazelnut	2.5	5	N
<i>Diervilla lonicera</i>	bush honeysuckle	2.5	6	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Elymus virginicus</i> var. <i>virginicus</i>	common eastern wild-rye	2.5	6	N
<i>Epilobium ciliatum</i>	American willow-herb	2.5	3	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Frangula alnus</i>	glossy buckthorn	2.5	0	I
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Hieracium caespitosum</i>	meadow hawkweed	2.5	0	I
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Juncus effusus</i>	common rush	2.5	4	N

<i>Lobelia inflata</i>	Indian tobacco	2.5	2	N
<i>Lycopus americanus</i>	cut-leaved bugleweed	2.5	4	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Lysimachia ciliata</i>	fringed loosestrife	2.5	5	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Persicaria hydropiper</i>	marsh waterpepper	2.5	0	I
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Potentilla norvegica</i>	rough cinquefoil	2.5	0	N
<i>Potentilla simplex</i>	oldfield cinquefoil	2.5	2	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Rhamnus cathartica</i>	common buckthorn	2.5	0	I
<i>Ribes hirtellum</i>	swamp gooseberry	2.5	6	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rosa blanda</i>	smooth wild rose	2.5	4	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Salix petiolaris</i>	slender willow	2.5	6	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago canadensis</i>	Canadian goldenrod	2.5	1	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Spiraea alba</i> var. <i>alba</i>	white meadowsweet	2.5	4	N
<i>Stellaria longifolia</i>	long-leaved chickweed	2.5	5	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I

<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Vaccinium myrtilloides</i>	velvet-leaved blueberry	2.5	6	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Viburnum rafinesquianum</i>	downy arrowwood	2.5	7	N
<i>Waldsteinia fragarioides subsp. fragarioides</i>	barren-strawberry	2.5	6	N
<i>Picea glauca</i>	white spruce	0	7	N

Sample Name	Crew	Date	Latitude	Longitude
was1006f	EJO/MJF	2022-08-23	46.404877	-90.81107
Wetland Name		Community Type		
was1006		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
237.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
36.214	2.756	4.839	0.368
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
34.698	40.531	4.443	5.189

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	37.5	8	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	15	5	N
<i>Thuja occidentalis</i>	white cedar	15	9	N
<i>Ulmus americana</i>	American elm	15	3	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer negundo</i>	box elder	2.5	0	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Alnus incana subsp. rugosa</i>	speckled alder	2.5	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina var. angustum</i>	lady fern	2.5	5	N
<i>Betula papyrifera</i>	canoe birch	2.5	3	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex lacustris</i>	lake sedge	2.5	6	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Circaea alpina subsp. alpina</i>	alpine enchanter's-nightshade	2.5	7	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N

<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Epilobium ciliatum</i>	American willow-herb	2.5	3	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum scirpoides</i>	dwarf scouring rush	2.5	7	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glechoma hederacea</i>	creeping charlie	2.5	0	I
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Hieracium caespitosum</i>	meadow hawkweed	2.5	0	I
<i>Lysimachia ciliata</i>	fringed loosestrife	2.5	5	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Populus balsamifera</i>	balsam poplar	2.5	4	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Rhamnus cathartica</i>	common buckthorn	2.5	0	I
<i>Ribes cynosbati</i>	prickly gooseberry	2.5	3	N
<i>Ribes glandulosum</i>	skunk currant	2.5	7	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis</i> subsp. <i>borealis</i>	American starflower	2.5	7	N
<i>Triosteum aurantiacum</i>	orange-fruit horse gentian	2.5	5	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Viburnum lentago</i>	nannyberry	2.5	4	N
<i>Vitis riparia</i>	wild grape	2.5	2	N

Sample Name	Crew	Date	Latitude	Longitude
wasc1033e	SAM/IGL	2022-08-31	46.401547	-90.801625
Wetland Name		Community Type		
wasc1033		Fresh Meadow (Disturbed Subtype)		
Total % Cover		Total % Non-Native Cover		
232		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
16.898	1.029	3.138	0.191
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
14.572	18.237	2.333	2.920

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Cornus stolonifera</i>	red osier dogwood	15	3	N
<i>Equisetum arvense</i>	field horsetail	15	1	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	15	6	N
<i>Leersia oryzoides</i>	rice cut grass	15	3	N
<i>Populus balsamifera</i>	balsam poplar	15	4	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	15	3	N
<i>Salix interior</i>	sandbar willow	15	2	N
<i>Scirpus atrovirens</i>	black bulrush	15	3	N
<i>Scirpus microcarpus</i>	panicked bulrush	15	6	N
<i>Solidago gigantea</i>	giant goldenrod	15	3	N
<i>Vitis riparia</i>	wild grape	15	2	N
<i>Agrostis gigantea</i>	redtop	2.5	0	I
<i>Agrostis</i> cf. <i>perennans</i>	autumn bent grass	2.5	4	N
<i>Asclepias syriaca</i>	common milkweed	2.5	1	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Barbarea vulgaris</i>	yellow rocket	2.5	0	I
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Carex retrorsa</i>	retorse sedge	2.5	6	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Carex vulpinoidea</i>	fox sedge	2.5	2	N
<i>Daucus carota</i>	Queen Anne's lace	2.5	0	I
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N

<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Lycopus americanus</i>	cut-leaved bugleweed	2.5	4	N
<i>Melilotus alba</i>	white sweet clover	2.5	0	I
<i>Melilotus officinalis</i>	yellow sweet clover	2.5	0	I
<i>Mentha arvensis</i> var. <i>canadensis</i>	common mint	2.5	3	N
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Rumex obtusifolius</i>	bitter dock	2.5	0	I
<i>Salix eriocephala</i>	diamond willow	2.5	4	N
<i>Sonchus arvensis</i>	field sow thistle	2.5	0	I
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Potentilla recta</i>	rough-fruited cinquefoil	1	0	I
<i>Ranunculus acris</i>	tall buttercup	1	0	I

Sample Name	Crew	Date	Latitude	Longitude
wasc1033s	SAM/IGL	2022-08-31	46.401375	-90.801943
Wetland Name		Community Type		
wasc1033		Shrub-Carr		
Total % Cover		Total % Non-Native Cover		
310.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
19.535	1.455	3.567	0.266
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
17.358	18.692	2.816	3.032

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Equisetum hyemale subsp. affine</i>	common scouring rush	87.5	3	N
<i>Salix interior</i>	sandbar willow	62.5	2	N
<i>Cornus stolonifera</i>	red osier dogwood	15	3	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	15	5	N
<i>Populus balsamifera</i>	balsam poplar	15	4	N
<i>Rhus hirta</i>	staghorn sumac	15	2	N
<i>Thuja occidentalis</i>	white cedar	15	9	N
<i>Vitis riparia</i>	wild grape	15	2	N
<i>Achillea millefolium</i>	common yarrow	2.5	1	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Alisma triviale</i>	common water plantain	2.5	4	N
<i>Amphicarpaea bracteata</i>	hog peanut	2.5	5	N
<i>Symphotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum arvense</i>	field horsetail	2.5	1	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Glyceria grandis var. grandis</i>	American manna grass	2.5	6	N
<i>Lapsana communis</i>	nipplewort	2.5	0	I
<i>Leersia oryzoides</i>	rice cut grass	2.5	3	N
<i>Leucanthemum vulgare</i>	ox-eye daisy	2.5	0	I
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N

<i>Persicaria maculosa</i>	lady's thumb	2.5	0	I
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Pinus strobus</i>	white pine	2.5	5	N
<i>Plantago major</i>	common plantain	2.5	0	I
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Scirpus atrovirens</i>	black bulrush	2.5	3	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Sonchus arvensis</i>	field sow thistle	2.5	0	I
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	1	5	N
<i>Barbarea vulgaris</i>	yellow rocket	1	0	I
<i>Rudbeckia hirta</i> var. <i>pulcherrima</i>	black-eyed susan	1	4	N

Sample Name	Crew	Date	Latitude	Longitude
wasc1014f	SAM/IGL	2022-08-31	46.397666	-90.781389
Wetland Name		Community Type		
wasc1014		Floodplain Forest		
Total % Cover		Total % Non-Native Cover		
323		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
22.528	1.728	3.476	0.267
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
19.868	21.499	2.704	2.926

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Populus balsamifera</i>	balsam poplar	62.5	4	N
<i>Equisetum arvense</i>	field horsetail	37.5	1	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	37.5	5	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Impatiens capensis</i>	spotted touch-me-not	15	2	N
<i>Phalaris arundinacea</i>	reed canary grass	15	0	I
<i>Solidago gigantea</i>	giant goldenrod	15	3	N
<i>Viburnum lentago</i>	nannyberry	15	4	N
<i>Acalypha rhomboidea</i>	three-seeded mercury	2.5	0	N
<i>Actaea rubra</i>	red baneberry	2.5	7	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Agrostis gigantea</i>	redtop	2.5	0	I
<i>Alisma triviale</i>	common water plantain	2.5	4	N
<i>Alliaria petiolata</i>	garlic mustard	2.5	0	I
<i>Amphicarpaea bracteata</i>	hog peanut	2.5	5	N
<i>Asclepias syriaca</i>	common milkweed	2.5	1	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Calystegia sepium</i>	hedge bindweed	2.5	2	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex retrorsa</i>	retrorse sedge	2.5	6	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Cornus racemosa</i>	gray dogwood	2.5	2	N

<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Daucus carota</i>	Queen Anne's lace	2.5	0	I
<i>Echinochloa crus-galli</i>	cockspur barnyard grass	2.5	0	I
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Galium boreale</i>	northern bedstraw	2.5	5	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Laportea canadensis</i>	woodnettle	2.5	4	N
<i>Lapsana communis</i>	nipplewort	2.5	0	I
<i>Lycopus virginicus</i>	Virginia bugleweed	2.5	8	N
<i>Muhlenbergia mexicana</i>	Mexican muhly grass	2.5	4	N
<i>Myosotis scorpioides</i>	true forget-me-not	2.5	0	I
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Persicaria maculosa</i>	lady's thumb	2.5	0	I
<i>Plantago major</i>	common plantain	2.5	0	I
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Poa pratensis</i> subsp. <i>pratensis</i>	Kentucky bluegrass	2.5	0	I
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Ribes americanum</i>	wild black currant	2.5	4	N
<i>Rumex crispus</i>	curly dock	2.5	0	I
<i>Salix bebbiana</i>	Bebb's willow	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Viola labradorica</i>	alpine violet	2.5	4	N
<i>Viola sororia</i>	door-yard violet	2.5	3	N
<i>Vitis riparia</i>	wild grape	2.5	2	N
<i>Geum canadense</i>	white avens	1	2	N
<i>Medicago lupulina</i>	black medick	1	0	I
<i>Ribes cynosbati</i>	prickly gooseberry	1	3	N

Sample Name	Crew	Date	Latitude	Longitude
wasc1041f	EJO/MJF	2022-08-23	46.39041	-90.774793
Wetland Name		Community Type		
wasc1041		Floodplain Forest		
Total % Cover		Total % Non-Native Cover		
349.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
39.064	3.601	4.423	0.408
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
34.674	38.846	3.485	3.904

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer rubrum</i>	red maple	15	3	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Betula papyrifera</i>	canoe birch	15	3	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	15	5	N
<i>Populus tremuloides</i>	quaking aspen	15	2	N
<i>Thuja occidentalis</i>	white cedar	15	9	N
<i>Tilia americana</i>	American basswood	15	5	N
<i>Achillea millefolium</i>	common yarrow	2.5	1	N
<i>Actaea rubra</i>	red baneberry	2.5	7	N
<i>Agrostis gigantea</i>	redtop	2.5	0	I
<i>Amphicarpaea bracteata</i>	hog peanut	2.5	5	N
<i>Arctium minus</i>	common burdock	2.5	0	I
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Bidens cernua</i>	nodding bur-marigold	2.5	4	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N

<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex vulpinoidea</i>	fox sedge	2.5	2	N
<i>Cicuta bulbifera</i>	bulb-bearing water hemlock	2.5	7	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's- nightshade	2.5	2	N
<i>Cornus alternifolia</i>	pagoda dogwood	2.5	7	N
<i>Danthonia spicata</i>	poverty grass	2.5	4	N
<i>Daucus carota</i>	Queen Anne's lace	2.5	0	I
<i>Epilobium ciliatum</i>	American willow-herb	2.5	3	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum hyemale subsp. affine</i>	common scouring rush	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum scirpoides</i>	dwarf scouring rush	2.5	7	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Erigeron philadelphicus var. philadelphicus</i>	common fleabane	2.5	2	N
<i>Eupatorium perfoliatum</i>	boneset	2.5	6	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Glyceria grandis var. grandis</i>	American manna grass	2.5	6	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lapsana communis</i>	nipplewort	2.5	0	I
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Melilotus alba</i>	white sweet clover	2.5	0	I
<i>Melilotus officinalis</i>	yellow sweet clover	2.5	0	I
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Muhlenbergia mexicana</i>	Mexican muhly grass	2.5	4	N
<i>Myosotis scorpioides</i>	true forget-me-not	2.5	0	I
<i>Myosoton aquaticum</i>	giant chickweed	2.5	0	I
<i>Oenothera biennis</i>	bastard evening-primrose	2.5	1	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Ostrya virginiana</i>	ironwood	2.5	5	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Plantago major</i>	common plantain	2.5	0	I
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Poa pratensis subsp. pratensis</i>	Kentucky bluegrass	2.5	0	I
<i>Fallopia cilinodis</i>	black-fringe bindweed	2.5	1	N

<i>Persicaria lapathifolia</i>		curly-top knotweed	2.5	2	N
<i>Persicaria pensylvanica</i>		Pennsylvania knotweed	2.5	1	N
<i>Populus balsamifera</i>		balsam poplar	2.5	4	N
<i>Prunella vulgaris</i>		heal-all	2.5	1	N
<i>Pteridium aquilinum</i>		bracken	2.5	2	N
<i>Pyrola asarifolia</i> subsp. <i>asarifolia</i>		liver-leaf wintergreen	2.5	8	N
<i>Pyrola elliptica</i>		elliptic shinleaf	2.5	6	N
<i>Ranunculus acris</i>		tall buttercup	2.5	0	I
<i>Ranunculus hispidus</i>		hispid buttercup	2.5	6	N
<i>Ranunculus recurvatus</i>		blisterwort	2.5	5	N
<i>Ribes americanum</i>		wild black currant	2.5	4	N
<i>Rubus idaeus</i> var. <i>strigosus</i>		red raspberry	2.5	3	N
<i>Rumex obtusifolius</i>		bitter dock	2.5	0	I
<i>Salix discolor</i>		pussy willow	2.5	2	N
<i>Scrophularia lanceolata</i>		lance-leaved figwort	2.5	4	N
<i>Scutellaria lateriflora</i>		mad dog skullcap	2.5	5	N
<i>Setaria pumila</i> subsp. <i>pumila</i>		yellow foxtail	2.5	0	I
<i>Maianthemum racemosum</i>		false Solomon's-seal	2.5	5	N
<i>Solidago canadensis</i>		Canadian goldenrod	2.5	1	N
<i>Solidago flexicaulis</i>		zigzag goldenrod	2.5	6	N
<i>Stachys palustris</i>		woundwort	2.5	5	N
<i>Tanacetum vulgare</i>		tansy	2.5	0	I
<i>Taraxacum officinale</i>		common dandelion	2.5	0	I
<i>Thalictrum dasycarpum</i>		tall meadow-rue	2.5	4	N
<i>Thalictrum dioicum</i>		early meadow-rue	2.5	7	N
<i>Trifolium pratense</i>		red clover	2.5	0	I
<i>Ulmus americana</i>		American elm	2.5	3	N
<i>Uvularia sessilifolia</i>		pale bellwort	2.5	6	N
<i>Verbena hastata</i>		blue vervain	2.5	3	N
<i>Veronica officinalis</i>		common speedwell	2.5	0	I
<i>Vitis riparia</i>		wild grape	2.5	2	N
<i>Oxalis stricta</i>		yellow wood-sorrel	1	0	N
<i>Thelypteris palustris</i>		northern marsh fern	1	7	N
<i>Lotus corniculatus</i>		bird's-foot trefoil	0	0	I
<i>Saponaria officinalis</i>		bouncing bet	0	0	I
<i>Urtica dioica</i> subsp. <i>gracilis</i>		stinging nettle	0	0	I

Sample Name	Crew	Date	Latitude	Longitude
wasc1045e	EJO/MJF	2022-08-23	46.389226	-90.770492
Wetland Name		Community Type		
wasc1045		Fresh Meadow (Disturbed Subtype)		
Total % Cover		Total % Non-Native Cover		
200		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
30.652	1.695	4.674	0.258
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
28.146	30.887	3.941	4.325

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Matteuccia struthiopteris</i>	American ostrich fern	37.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Betula papyrifera</i>	canoe birch	15	3	N
<i>Tilia americana</i>	American basswood	15	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Actaea rubra</i>	red baneberry	2.5	7	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex scabrata</i>	eastern rough sedge	2.5	8	N
<i>Carex tenera</i>	marsh straw sedge	2.5	4	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N

<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Geum laciniatum</i>	rough avens	2.5	5	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lapsana communis</i>	nipplewort	2.5	0	I
<i>Lysimachia ciliata</i>	fringed loosestrife	2.5	5	N
<i>Myosoton aquaticum</i>	giant chickweed	2.5	0	I
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Poa pratensis</i> subsp. <i>pratensis</i>	Kentucky bluegrass	2.5	0	I
<i>Fallopia cilinodis</i>	black-fringe bindweed	2.5	1	N
<i>Polygonum hydropiper</i>		2.5	0	
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Rhamnus cathartica</i>	common buckthorn	2.5	0	I
<i>Ribes americanum</i>	wild black currant	2.5	4	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Thuja occidentalis</i>	white cedar	2.5	9	N
<i>Viburnum acerifolium</i>	dockmackie	2.5	7	N

Sample Name	Crew	Date	Latitude	Longitude
wasc1045f	EJO/MJF	2022-08-23	46.389954	-90.770289
Wetland Name		Community Type		
wasc1045		Floodplain Forest		
Total % Cover		Total % Non-Native Cover		
235		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
34.796	2.107	5.130	0.311
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
34.424	30.340	5.021	4.426

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer rubrum</i>	red maple	37.5	3	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Carex bromoides</i>	brome-like sedge	15	8	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	15	5	N
<i>Populus tremuloides</i>	quaking aspen	15	2	N
<i>Tilia americana</i>	American basswood	15	5	N
<i>Ulmus americana</i>	American elm	15	3	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Actaea rubra</i>	red baneberry	2.5	7	N
<i>Amphicarpaea bracteata</i>	hog peanut	2.5	5	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex interior</i>	interior sedge	2.5	7	N
<i>Carex tenera</i>	marsh straw sedge	2.5	4	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N

<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Pyrola asarifolia</i> subsp. <i>asarifolia</i>	liver-leaf wintergreen	2.5	8	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Rhamnus cathartica</i>	common buckthorn	2.5	0	I
<i>Ribes cynosbati</i>	prickly gooseberry	2.5	3	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Trillium grandiflorum</i>	large-flowered trillium	2.5	6	N
<i>Uvularia sessilifolia</i>	pale bellwort	2.5	6	N
<i>Viburnum acerifolium</i>	dockmackie	2.5	7	N
<i>Carex pedunculata</i>	long-stalked sedge	0	7	N
<i>Monotropa uniflora</i>	Ghost pipe	0	5	N

Sample Name	Crew	Date	Latitude	Longitude
wasb1004f	SAM/IGL	2022-08-23	46.386864	-90.761109
Wetland Name		Community Type		
wasb1004		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
218		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
24.675	1.291	3.854	0.202
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
22.345	21.894	3.160	3.096

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus pennsylvanica</i>	green ash	37.5	2	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Carex gracillima</i>	graceful sedge	15	5	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Populus tremuloides</i>	quaking aspen	15	2	N
<i>Scirpus hattorianus</i>	mosquito bulrush	15	3	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Agrostis gigantea</i>	redtop	2.5	0	I
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Betula papyrifera</i>	canoe birch	2.5	3	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex arcata</i>	drooping wood sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex vulpinoidea</i>	fox sedge	2.5	2	N
<i>Cornus racemosa</i>	gray dogwood	2.5	2	N
<i>Dactylis glomerata</i>	orchard grass	2.5	0	I
<i>Daucus carota</i>	Queen Anne's lace	2.5	0	I
<i>Equisetum hyemale</i> subsp. <i>affine</i>	common scouring rush	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N

<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Hieracium caespitosum</i>	meadow hawkweed	2.5	0	I
<i>Hieracium umbellatum</i>	Canada hawkweed	2.5	5	N
<i>Juncus dudleyi</i>	Dudley's rush	2.5	4	N
<i>Leersia oryzoides</i>	rice cut grass	2.5	3	N
<i>Lotus corniculatus</i>	bird's-foot trefoil	2.5	0	I
<i>Lycopus americanus</i>	cut-leaved bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Monotropa uniflora</i>	Ghost pipe	2.5	5	N
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Plantago major</i>	common plantain	2.5	0	I
<i>Poa compressa</i>	Canada bluegrass	2.5	0	I
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Spiraea alba var. alba</i>	white meadowsweet	2.5	4	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Viburnum lentago</i>	nannyberry	2.5	4	N
<i>Vitis riparia</i>	wild grape	2.5	2	N
<i>Cornus obliqua</i>	blue-fruited dogwood	1	4	N
<i>Prunus virginiana var. virginiana</i>	chokecherry	1	3	N
<i>Ulmus americana</i>	American elm	1	3	N

Sample Name	Crew	Date	Latitude	Longitude
wase001e	EJO/MJF	2022-08-24	46.377617	-90.741574
Wetland Name		Community Type		
wase001		Open Bog		
Total % Cover		Total % Non-Native Cover		
192.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
33.580	2.420	5.447	0.393
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
33.580	42.270	5.447	6.857

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Chamaedaphne calyculata</i> var. <i>angustifolia</i>	leather-leaf	62.5	9	N
<i>Carex oligosperma</i>	bog wiregrass sedge	15	10	N
<i>Carex utriculata</i>	beaked sedge	15	7	N
<i>Scirpus cyperinus</i>	wool-grass	15	4	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Betula papyrifera</i>	canoe birch	2.5	3	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex lasiocarpa</i> subsp. <i>americana</i>	narrow-leaved woolly sedge	2.5	9	N
<i>Epilobium leptophyllum</i>	linear-leaved willow herb	2.5	8	N
<i>Eriophorum virginicum</i>	tawny cottongrass	2.5	10	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Glyceria canadensis</i> var. <i>canadensis</i>	rattlesnake grass	2.5	7	N
<i>Ilex mucronata</i>	cat-berry	2.5	8	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Larix laricina</i>	tamarack	2.5	8	N
<i>Rhododendron groenlandicum</i>	Labrador-tea	2.5	8	N
<i>Lysimachia thyrsiflora</i>	tufted loosestrife	2.5	7	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N

<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Salix bebbiana</i>	Bebb's willow	2.5	7	N
<i>Salix discolor</i>	pussy willow	2.5	2	N
<i>Salix pedicellaris</i>	bog willow	2.5	8	N
<i>Salix petiolaris</i>	slender willow	2.5	6	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Solidago canadensis</i>	Canadian goldenrod	2.5	1	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thelypteris palustris</i>	northern marsh fern	2.5	7	N
<i>Triadenum fraseri</i>	marsh St. John's wort	2.5	8	N
<i>Typha latifolia</i>	broad-leaved cattail	2.5	1	N

Sample Name	Crew	Date	Latitude	Longitude
wasd1024e	EJO/MJF	2022-08-24	46.377567	-90.736004
Wetland Name		Community Type		
wasd1024		Fresh Meadow (Native Subtype)		
Total % Cover		Total % Non-Native Cover		
202.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
29.829	1.604	4.659	0.251
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
29.127	27.282	4.442	4.160

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Calamagrostis canadensis</i>	bluejoint	37.5	5	N
<i>Scirpus cyperinus</i>	wool-grass	37.5	4	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	15	3	N
<i>Solidago canadensis</i>	Canadian goldenrod	15	1	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Symphyotrichum lanceolatum</i>	eastern lined aster	2.5	4	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex lacustris</i>	lake sedge	2.5	6	N
<i>Carex tenera</i>	marsh straw sedge	2.5	4	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Epilobium angustifolium</i> subsp. <i>circumvagum</i>	fireweed	2.5	3	N
<i>Epilobium leptophyllum</i>	linear-leaved willow herb	2.5	8	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Fragaria vesca</i> subsp. <i>americana</i>	hillside strawberry	2.5	3	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Frangula alnus</i>	glossy buckthorn	2.5	0	I
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N

<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Lysimachia thyrsiflora</i>	tufted loosestrife	2.5	7	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Rumex britannica</i>	great water dock	2.5	8	N
<i>Salix bebbiana</i>	Bebb's willow	2.5	7	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Tanacetum vulgare</i>	tansy	2.5	0	I
<i>Viburnum lentago</i>	nannyberry	2.5	4	N
<i>Vitis riparia</i>	wild grape	2.5	2	N

Sample Name	Crew	Date	Latitude	Longitude
wasd1024f1	EJO/MJF	2022-08-24	46.377779	-90.735898
Wetland Name		Community Type		
wasd1024		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
213.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
28.735	1.446	4.857	0.244
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
27.948	23.419	4.595	3.850

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Populus tremuloides</i>	quaking aspen	62.5	2	N
<i>Fraxinus nigra</i>	black ash	15	8	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Pteridium aquilinum</i>	bracken	15	2	N
<i>Rubus pubescens</i>	dwarf raspberry	15	7	N
<i>Viburnum lentago</i>	nannyberry	15	4	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lanceolatum</i>	eastern lined aster	2.5	4	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Gaultheria procumbens</i>	wintergreen	2.5	6	N
<i>Hieracium caespitosum</i>	meadow hawkweed	2.5	0	I
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N

<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Prunus serotina</i>	wild black cherry	2.5	3	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Quercus rubra</i>	northern red oak	2.5	5	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Vaccinium myrtilloides</i>	velvet-leaved blueberry	2.5	6	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Pinus resinosa</i>	red pine	1	7	N

Sample Name	Crew	Date	Latitude	Longitude
wasd1024f2	EJO/MJF	2022-08-24	46.37772	-90.735523
Wetland Name		Community Type		
wasd1024		Coniferous Bog		
Total % Cover		Total % Non-Native Cover		
225		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
41.100	3.225	6.757	0.530
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
41.100	48.189	6.757	7.922

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Chamaedaphne calyculata</i> var. <i>angustifolia</i>	leather-leaf	62.5	9	N
<i>Picea mariana</i>	black spruce	37.5	8	N
<i>Carex oligosperma</i>	bog wiregrass sedge	15	10	N
<i>Carex trisperma</i>	three-seeded bog sedge	15	9	N
<i>Rhododendron groenlandicum</i>	Labrador-tea	15	8	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Andromeda glaucophylla</i>	bog-rosemary	2.5	10	N
<i>Betula papyrifera</i>	canoe birch	2.5	3	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex magellanica</i>	boreal bog sedge	2.5	10	N
<i>Carex scoparia</i> var. <i>scoparia</i>	lance-fruited oval sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Carex tenera</i>	marsh straw sedge	2.5	4	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Eriophorum vaginatum</i> subsp. <i>spissum</i>	tussock cotton-grass	2.5	10	N
<i>Eriophorum virginicum</i>	tawny cottongrass	2.5	10	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Gaultheria hispidula</i>	creeping snowberry	2.5	8	N
<i>Ilex mucronata</i>	cat-berry	2.5	8	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Kalmia polifolia</i>	bog laurel	2.5	10	N
<i>Larix laricina</i>	tamarack	2.5	8	N

<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Lysimachia thysiflora</i>	tufted loosestrife	2.5	7	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Rumex britannica</i>	great water dock	2.5	8	N
<i>Salix petiolaris</i>	slender willow	2.5	6	N
<i>Salix pyrifolia</i>	balsam willow	2.5	7	N
<i>Sarracenia purpurea subsp. purpurea</i>	purple pitcher-plant	2.5	10	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Maianthemum trifolium</i>	false mayflower	2.5	10	N
<i>Typha latifolia</i>	broad-leaved cattail	2.5	1	N
<i>Vaccinium myrtilloides</i>	velvet-leaved blueberry	2.5	6	N
<i>Vaccinium oxycoccos</i>	small cranberry	2.5	9	N

Sample Name	Crew	Date	Latitude	Longitude
wasd1024s	EJO/MJF	2022-08-24	46.377141	-90.733265
Wetland Name		Community Type		
wasd1024		Open Bog		
Total % Cover		Total % Non-Native Cover		
142.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
33.154	1.658	6.913	0.346
Floristic Quality Metrics: All Species (a)			
FQla	wFQla	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
33.154	39.124	6.913	8.158

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Chamaedaphne calyculata</i> var. <i>angustifolia</i>	leather-leaf	87.5	9	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Andromeda glaucophylla</i>	bog-rosemary	2.5	10	N
<i>Betula papyrifera</i>	canoe birch	2.5	3	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex magellanica</i>	boreal bog sedge	2.5	10	N
<i>Carex oligosperma</i>	bog wiregrass sedge	2.5	10	N
<i>Carex trisperma</i>	three-seeded bog sedge	2.5	9	N
<i>Eriophorum virginicum</i>	tawny cottongrass	2.5	10	N
<i>Ilex mucronata</i>	cat-berry	2.5	8	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Kalmia polifolia</i>	bog laurel	2.5	10	N
<i>Larix laricina</i>	tamarack	2.5	8	N
<i>Rhododendron groenlandicum</i>	Labrador-tea	2.5	8	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Rumex britannica</i>	great water dock	2.5	8	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Maianthemum trifolium</i>	false mayflower	2.5	10	N

Sample Name	Crew	Date	Latitude	Longitude
wasd1028f	SAM/IGL	2022-08-29	46.376064	-90.728143
Wetland Name		Community Type		
wasd1028		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
201		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
37.086	2.629	5.591	0.396
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
36.271	44.895	5.348	6.619

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	37.5	8	N
<i>Thuja occidentalis</i>	white cedar	37.5	9	N
<i>Carex scabrata</i>	eastern rough sedge	15	8	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Betula papyrifera</i>	canoe birch	2.5	3	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Cornus alternifolia</i>	pagoda dogwood	2.5	7	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum hyemale</i> subsp. <i>affine</i>	common scouring rush	2.5	3	N

<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum scirpoides</i>	dwarf scouring rush	2.5	7	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Galium triflorum</i>	fragrant bedstraw	1	5	N
<i>Picea glauca</i>	white spruce	1	7	N
<i>Solanum dulcamara</i>	bittersweet nightshade	1	0	I
<i>Trillium cernuum</i>	nodding trillium	1	8	N
<i>Tsuga canadensis</i>	eastern hemlock	1	8	N
<i>Veronica officinalis</i>	common speedwell	1	0	I

Sample Name	Crew	Date	Latitude	Longitude
was139f_x	SAM/IGL	2022-09-02	46.372871	-90.712234
Wetland Name		Community Type		
was139_x		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
280.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
36.137	3.246	4.873	0.438
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
35.813	41.378	4.786	5.529

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Acer saccharum</i>	sugar maple	37.5	5	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	15	4	N
<i>Carex bromoides</i>	brome-like sedge	15	8	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	15	5	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	15	3	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lanceolatum</i>	eastern lined aster	2.5	4	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Calystegia sepium</i>	hedge bindweed	2.5	2	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Caulophyllum thalictroides</i>	blue cohosh	2.5	8	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Cornus racemosa</i>	gray dogwood	2.5	2	N

<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Elymus virginicus</i> var. <i>virginicus</i>	common eastern wild-rye	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Geum canadense</i>	white avens	2.5	2	N
<i>Glyceria canadensis</i> var. <i>canadensis</i>	rattlesnake grass	2.5	7	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Laportea canadensis</i>	woodnettle	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Rumex obtusifolius</i>	bitter dock	2.5	0	I
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Thuja occidentalis</i>	white cedar	2.5	9	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Viburnum lentago</i>	nannyberry	2.5	4	N
<i>Prunus serotina</i>	wild black cherry	1	3	N
<i>Stachys palustris</i>	woundwort	1	5	N
<i>Trillium cernuum</i>	nodding trillium	1	8	N

Sample Name	Crew	Date	Latitude	Longitude
wasv013f	EJO/MJF	2022-08-24	46.363381	-90.702992
Wetland Name		Community Type		
wasv013		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
212.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
35.218	1.813	5.083	0.262
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
34.167	29.574	4.784	4.141

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus pennsylvanica</i>	green ash	62.5	2	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula papyrifera</i>	canoe birch	2.5	3	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex rosea</i>	starry sedge	2.5	4	N
<i>Carex scabrata</i>	eastern rough sedge	2.5	8	N
<i>Carex tenera</i>	marsh straw sedge	2.5	4	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Cornus racemosa</i>	gray dogwood	2.5	2	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N

<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Gaultheria procumbens</i>	wintergreen	2.5	6	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Ostrya virginiana</i>	ironwood	2.5	5	N
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Poa pratensis</i> subsp. <i>pratensis</i>	Kentucky bluegrass	2.5	0	I
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Quercus rubra</i>	northern red oak	2.5	5	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis</i> subsp. <i>borealis</i>	American starflower	2.5	7	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I

Sample Name	Crew	Date	Latitude	Longitude
wasv019e	EJO/MJF	2022-08-24	46.359626	-90.694212
Wetland Name		Community Type		
wasv019		Fresh Meadow (Disturbed Subtype)		
Total % Cover		Total % Non-Native Cover		
230		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
30.243	1.431	4.667	0.221
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
24.694	25.624	3.111	3.228

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Juncus effusus</i>	common rush	37.5	4	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	15	6	N
<i>Leersia oryzoides</i>	rice cut grass	15	3	N
<i>Ranunculus acris</i>	tall buttercup	15	0	I
<i>Achillea millefolium</i>	common yarrow	2.5	1	N
<i>Agrostis gigantea</i>	redtop	2.5	0	I
<i>Agrostis scabra</i>		2.5	0	
<i>Anthoxanthum odoratum</i>		2.5	0	
<i>Symphyotrichum firmum</i>	shining aster	2.5	6	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Bidens cernua</i>	nodding bur-marigold	2.5	4	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex scoparia</i> var. <i>scoparia</i>	lance-fruited oval sedge	2.5	4	N
<i>Carex utriculata</i>	beaked sedge	2.5	7	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Cirsium vulgare</i>	bull thistle	2.5	0	I
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Daucus carota</i>	Queen Anne's lace	2.5	0	I
<i>Echinochloa muricata</i>	rough barnyard grass	2.5	1	N
<i>Eleocharis obtusa</i>	blunt spike-rush	2.5	3	N
<i>Epilobium leptophyllum</i>	linear-leaved willow herb	2.5	8	N
<i>Equisetum arvense</i>	field horsetail	2.5	1	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N

<i>Eupatorium perfoliatum</i>	boneset	2.5	6	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Hieracium aurantiacum</i>	orange hawkweed	2.5	0	I
<i>Hieracium caespitosum</i>	meadow hawkweed	2.5	0	I
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Juncus brevicaudatus</i>	narrow-panicked rush	2.5	6	N
<i>Lotus corniculatus</i>	bird's-foot trefoil	2.5	0	I
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Lythrum salicaria</i>	purple loosestrife	2.5	0	I
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Mitella nuda</i>	naked miterwort	2.5	9	N
<i>Myosoton aquaticum</i>	giant chickweed	2.5	0	I
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Persicaria hydropiper</i>	marsh waterpepper	2.5	0	I
<i>Persicaria maculosa</i>	lady's thumb	2.5	0	I
<i>Phleum pratense subsp. pratense</i>	timothy	2.5	0	I
<i>Plantago major</i>	common plantain	2.5	0	I
<i>Poa pratensis subsp. pratensis</i>	Kentucky bluegrass	2.5	0	I
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Potentilla norvegica</i>	rough cinquefoil	2.5	0	N
<i>Potentilla simplex</i>	oldfield cinquefoil	2.5	2	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Rumex crispus</i>	curly dock	2.5	0	I
<i>Salix discolor</i>	pussy willow	2.5	2	N
<i>Salix petiolaris</i>	slender willow	2.5	6	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Setaria pumila subsp. pumila</i>	yellow foxtail	2.5	0	I
<i>Thelypteris palustris</i>	northern marsh fern	2.5	7	N
<i>Thuja occidentalis</i>	white cedar	2.5	9	N
<i>Trifolium pratense</i>	red clover	2.5	0	I
<i>Trifolium repens</i>	white clover	2.5	0	I
<i>Tsuga canadensis</i>	eastern hemlock	2.5	8	N
<i>Urtica dioica subsp. gracilis</i>	stinging nettle	2.5	0	I

Sample Name	Crew	Date	Latitude	Longitude
wasv019f	EJO/MJF	2022-08-24	46.359998	-90.694968
Wetland Name		Community Type		
wasv019		Coniferous Swamp		
Total % Cover		Total % Non-Native Cover		
234.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
38.552	3.091	5.346	0.429
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
37.149	46.001	4.964	6.147

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Thuja occidentalis</i>	white cedar	62.5	9	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Fraxinus nigra</i>	black ash	15	8	N
<i>Impatiens capensis</i>	spotted touch-me-not	15	2	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Bidens cernua</i>	nodding bur-marigold	2.5	4	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex leptalea</i> subsp. <i>leptalea</i>	slender sedge	2.5	9	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Circaea alpina</i> subsp. <i>alpina</i>	alpine enchanter's-nightshade	2.5	7	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Echinochloa muricata</i>	rough barnyard grass	2.5	1	N
<i>Eleocharis obtusa</i>	blunt spike-rush	2.5	3	N

<i>Epilobium ciliatum</i>	American willow-herb	2.5	3	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Laportea canadensis</i>	woodnettle	2.5	4	N
<i>Leersia oryzoides</i>	rice cut grass	2.5	3	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Mitella nuda</i>	naked miterwort	2.5	9	N
<i>Monotropa uniflora</i>	Ghost pipe	2.5	5	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Persicaria hydropiper</i>	marsh waterpepper	2.5	0	I
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis</i> subsp. <i>borealis</i>	American starflower	2.5	7	N
<i>Tsuga canadensis</i>	eastern hemlock	2.5	8	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Danthonia spicata</i>	poverty grass	1	4	N
<i>Taraxacum officinale</i>	common dandelion	1	0	I

Sample Name	Crew	Date	Latitude	Longitude
wasv059f1	EJO/MJF	2022-08-24	46.3522	-90.68107
Wetland Name		Community Type		
wasv059		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
170		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
31.899	1.617	5.471	0.277
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
31.899	31.984	5.471	5.485

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	37.5	8	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Ostrya virginiana</i>	ironwood	15	5	N
<i>Tilia americana</i>	American basswood	15	5	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Symphotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Clintonia borealis</i>	bluebead lily	2.5	7	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Gaultheria procumbens</i>	wintergreen	2.5	6	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N

<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Quercus rubra</i>	northern red oak	2.5	5	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N

Sample Name	Crew	Date	Latitude	Longitude
wasc069s	EJO/MJF	2022-08-25	46.347145	-90.677993
Wetland Name		Community Type		
wasc069		Alder Thicket		
Total % Cover		Total % Non-Native Cover		
274.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
36.407	2.680	4.909	0.361
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
35.453	33.709	4.655	4.426

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	62.5	4	N
<i>Glyceria striata</i>	fowl manna grass	37.5	4	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Ilex verticillata</i>	common winterberry	15	7	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gynandra</i>	nodding sedge	2.5	6	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Coptis trifolia</i>	three-leaved gold-thread	2.5	8	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N

<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria canadensis</i> var. <i>canadensis</i>	rattlesnake grass	2.5	7	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Hieracium caespitosum</i>	meadow hawkweed	2.5	0	I
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Mitella nuda</i>	naked miterwort	2.5	9	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Fallopia cilinodis</i>	black-fringe bindweed	2.5	1	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Populus balsamifera</i>	balsam poplar	2.5	4	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Prunus serotina</i>	wild black cherry	2.5	3	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Rhamnus cathartica</i>	common buckthorn	2.5	0	I
<i>Ribes cynosbati</i>	prickly gooseberry	2.5	3	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Solidago canadensis</i>	Canadian goldenrod	2.5	1	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Trientalis borealis</i> subsp. <i>borealis</i>	American starflower	2.5	7	N
<i>Ulmus pumila</i>	Siberian elm	2.5	0	I
<i>Acer saccharum</i>	sugar maple	1	5	N
<i>Quercus rubra</i>	northern red oak	1	5	N

Sample Name	Crew	Date	Latitude	Longitude
wasc071f	EJO/MJF	2022-08-25	46.345167	-90.676449
Wetland Name		Community Type		
wasc071		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
348		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
46.496	5.462	5.299	0.622
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
46.496	52.776	5.299	6.014

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Ilex verticillata</i>	common winterberry	15	7	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Rubus pubescens</i>	dwarf raspberry	15	7	N
<i>Thuja occidentalis</i>	white cedar	15	9	N
<i>Tsuga canadensis</i>	eastern hemlock	15	8	N
<i>Ulmus americana</i>	American elm	15	3	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Acer spicatum</i>	mountain maple	2.5	6	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Alnus incana subsp. rugosa</i>	speckled alder	2.5	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N

<i>Carex gynandra</i>	nodding sedge	2.5	6	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex lacustris</i>	lake sedge	2.5	6	N
<i>Carex leptalea</i> subsp. <i>leptalea</i>	slender sedge	2.5	9	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Carex stricta</i>	tussock sedge	2.5	7	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Clintonia borealis</i>	bluebead lily	2.5	7	N
<i>Coptis trifolia</i>	three-leaved gold-thread	2.5	8	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria canadensis</i> var. <i>canadensis</i>	rattlesnake grass	2.5	7	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Mitella nuda</i>	naked miterwort	2.5	9	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N

<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago canadensis</i>	Canadian goldenrod	2.5	1	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Trillium cernuum</i>	nodding trillium	2.5	8	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	1	6	N
<i>Prunus serotina</i>	wild black cherry	1	3	N
<i>Scirpus cyperinus</i>	wool-grass	1	4	N

Sample Name	Crew	Date	Latitude	Longitude
wasc072f	EJO/MJF	2022-08-25	46.343685	-90.675414
Wetland Name		Community Type		
wasc072		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
310		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
46.198	4.497	5.444	0.530
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
45.569	49.449	5.297	5.748

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Carex bromoides</i>	brome-like sedge	37.5	8	N
<i>Fraxinus nigra</i>	black ash	37.5	8	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Osmunda cinnamomea</i>	cinnamon fern	15	7	N
<i>Ulmus americana</i>	American elm	15	3	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Alnus incana subsp. rugosa</i>	speckled alder	2.5	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina var. angustum</i>	lady fern	2.5	5	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex crinita var. crinita</i>	fringed sedge	2.5	6	N
<i>Carex gynandra</i>	nodding sedge	2.5	6	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex leptalea subsp. leptalea</i>	slender sedge	2.5	9	N

<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex scabrata</i>	eastern rough sedge	2.5	8	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Clintonia borealis</i>	bluebead lily	2.5	7	N
<i>Coptis trifolia</i>	three-leaved gold-thread	2.5	8	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Hieracium caespitosum</i>	meadow hawkweed	2.5	0	I
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Milium effusum</i> var. <i>cisatlanticum</i>	American millet grass	2.5	7	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Mitella nuda</i>	naked miterwort	2.5	9	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N

<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Maianthemum racemosum</i>	false Solomon's-seal	2.5	5	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trillium grandiflorum</i>	large-flowered trillium	2.5	6	N
<i>Equisetum fluviatile</i>	water horsetail	1	7	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	1	4	N
<i>Quercus rubra</i>	northern red oak	1	5	N
<i>Rumex obtusifolius</i>	bitter dock	1	0	I
<i>Uvularia sessilifolia</i>	pale bellwort	1	6	N

Sample Name	Crew	Date	Latitude	Longitude
wasc074e	EJO/MJF	2022-08-25	46.343512	-90.675611
Wetland Name		Community Type		
wasc074		Sedge Meadow		
Total % Cover		Total % Non-Native Cover		
185.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
31.465	1.036	4.975	0.164
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
30.706	19.599	4.738	3.024

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Carex bromoides</i>		62.5	0	
<i>Acer rubrum</i>	red maple	15	3	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	15	4	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Epilobium ciliatum</i>	American willow-herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N

<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Fallopia cilinodis</i>	black-fringe bindweed	2.5	1	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Uvularia sessilifolia</i>	pale bellwort	2.5	6	N
<i>Abies balsamea</i>	balsam fir	1	5	N
<i>Caltha palustris</i>	common marsh marigold	1	6	N
<i>Stachys palustris</i>	woundwort	1	5	N

Sample Name	Crew	Date	Latitude	Longitude
wasb011f	SAM/IGL	2022-08-24	46.338698	-90.669062
Wetland Name		Community Type		
wasb011		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
207.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
38.413	2.702	5.327	0.375
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
37.695	44.622	5.130	6.072

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Carex bromoides</i>	brome-like sedge	62.5	8	N
<i>Equisetum sylvaticum</i>	woodland horsetail	15	7	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Cardamine pensylvanica</i>	Pennsylvania bitter cress	2.5	3	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex scabrata</i>	eastern rough sedge	2.5	8	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Chrysosplenium americanum</i>	American golden saxifrage	2.5	9	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N

<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Monotropa uniflora</i>	Ghost pipe	2.5	5	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Persicaria punctata</i>	dotted smartweed	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ribes glandulosum</i>	skunk currant	2.5	7	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Rumex obtusifolius</i>	bitter dock	2.5	0	I
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Ulmus americana</i>	American elm	2.5	3	N

Sample Name	Crew	Date	Latitude	Longitude
was038f	SAM/IGL	2022-08-24	46.336887	-90.662192
Wetland Name		Community Type		
was038		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
368.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
51.808	6.152	5.523	0.656
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
50.396	57.443	5.226	5.957

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Carex bromoides</i>	brome-like sedge	37.5	8	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	15	4	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Carex scabrata</i>	eastern rough sedge	15	8	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Allium tricoccum</i>	wild leek	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex radiata</i>	eastern star sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Chrysosplenium americanum</i>	American golden saxifrage	2.5	9	N

<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's- nightshade	2.5	2	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Clintonia borealis</i>	bluebead lily	2.5	7	N
<i>Coptis trifolia</i>	three-leaved gold-thread	2.5	8	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Deparia acrostichoides</i>	silver false spleenwort	2.5	10	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Elymus virginicus</i> var. <i>virginicus</i>	common eastern wild-rye	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum fluviatile</i>	water horsetail	2.5	7	N
<i>Equisetum scirpoides</i>	dwarf scouring rush	2.5	7	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Fallopia convolvulus</i>	black-bindweed	2.5	0	I
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Lactuca biennis</i>	biennial blue lettuce	2.5	3	N
<i>Laportea canadensis</i>	woodnettle	2.5	4	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Mitella diphylla</i>	two-leaved miterwort	2.5	8	N
<i>Monotropa uniflora</i>	Ghost pipe	2.5	5	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N

<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Phryma leptostachya</i>	American lop-seed	2.5	5	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Ranunculus sceleratus</i>	cursed crowfoot	2.5	3	N
<i>Rhamnus cathartica</i>	common buckthorn	2.5	0	I
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Rumex britannica</i>	great water dock	2.5	8	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Maianthemum racemosum</i>	false Solomon's-seal	2.5	5	N
<i>Solanum dulcamara</i>	bittersweet nightshade	2.5	0	I
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Acer spicatum</i>	mountain maple	1	6	N
<i>Caulophyllum thalictroides</i>	blue cohosh	1	8	N
<i>Picea glauca</i>	white spruce	1	7	N
<i>Platanthera huronensis</i>	Huron green orchid	1	7	N
<i>Thuja occidentalis</i>	white cedar	1	9	N
<i>Trillium cernuum</i>	nodding trillium	1	8	N

Sample Name	Crew	Date	Latitude	Longitude
wasd1008f	SAM/IGL	2022-08-24	46.335996	-90.651985
Wetland Name		Community Type		
wasd1008		Floodplain Forest		
Total % Cover		Total % Non-Native Cover		
315.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
26.405	1.761	4.175	0.279
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
24.623	20.132	3.630	2.968

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer saccharinum</i>	silver maple	87.5	2	N
<i>Fraxinus pennsylvanica</i>	green ash	37.5	2	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	37.5	5	N
<i>Carex radiata</i>	eastern star sedge	15	4	N
<i>Fallopia convolvulus</i>	black-bindweed	15	0	I
<i>Impatiens capensis</i>	spotted touch-me-not	15	2	N
<i>Laportea canadensis</i>	woodnettle	15	4	N
<i>Alliaria petiolata</i>	garlic mustard	2.5	0	I
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Echinocystis lobata</i>	wild cucumber	2.5	2	N
<i>Elymus virginicus</i> var. <i>virginicus</i>	common eastern wild-rye	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum hyemale</i> subsp. <i>affine</i>	common scouring rush	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Geum canadense</i>	white avens	2.5	2	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N

<i>Linaria vulgaris</i>	butter-and-eggs	2.5	0	I
<i>Lysimachia ciliata</i>	fringed loosestrife	2.5	5	N
<i>Myosotis scorpioides</i>	true forget-me-not	2.5	0	I
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Rhamnus cathartica</i>	common buckthorn	2.5	0	I
<i>Ribes americanum</i>	wild black currant	2.5	4	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Rudbeckia laciniata</i> var. <i>laciniata</i>	cut-leaved coneflower	2.5	6	N
<i>Sanguinaria canadensis</i>	bloodroot	2.5	6	N
<i>Smilax tamnoides</i>	bristly greenbrier	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Uvularia sessilifolia</i>	pale bellwort	2.5	6	N
<i>Viola pubescens</i>	yellow violet	2.5	5	N
<i>Cornus alternifolia</i>	pagoda dogwood	1	7	N
<i>Festuca subverticillata</i>	nodding fescue	1	4	N
<i>Heracleum lanatum</i>	cow parsnip	1	3	N

Sample Name	Crew	Date	Latitude	Longitude
wasd1010f	SAM/IGL	2022-08-25	46.338133	-90.627971
Wetland Name		Community Type		
wasd1010		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
304		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
28.846	2.370	3.962	0.325
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
27.111	28.398	3.500	3.666

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Scirpus cyperinus</i>	wool-grass	62.5	4	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	15	4	N
<i>Symphotrichum lateriflorum</i>	side-flowering aster	15	3	N
<i>Carex projecta</i>	projecting sedge	15	4	N
<i>Glyceria striata</i>	fowl manna grass	15	4	N
<i>Juncus effusus</i>	common rush	15	4	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	15	6	N
<i>Populus tremuloides</i>	quaking aspen	15	2	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	15	3	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex bebbii</i>	Bebb's sedge	2.5	4	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Cirsium vulgare</i>	bull thistle	2.5	0	I
<i>Echinocystis lobata</i>	wild cucumber	2.5	2	N
<i>Epilobium ciliatum</i>	American willow-herb	2.5	3	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N

<i>Equisetum arvense</i>	field horsetail	2.5	1	N
<i>Erechtites hieracifolia</i> var. <i>hieracifolia</i>	American burn-weed	2.5	2	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Helianthus giganteus</i>	giant sunflower	2.5	4	N
<i>Heracleum lanatum</i>	cow parsnip	2.5	3	N
<i>Hieracium aurantiacum</i>	orange hawkweed	2.5	0	I
<i>Hieracium umbellatum</i>	Canada hawkweed	2.5	5	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lamium amplexicaule</i>	henbit	2.5	0	I
<i>Lonicera hirsuta</i>	hairy honeysuckle	2.5	7	N
<i>Lycopus americanus</i>	cut-leaved bugleweed	2.5	4	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Potentilla norvegica</i>	rough cinquefoil	2.5	0	N
<i>Potentilla simplex</i>	oldfield cinquefoil	2.5	2	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Ranunculus hispidus</i> var. <i>nitidus</i>	hispid buttercup	2.5	5	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Rumex crispus</i>	curly dock	2.5	0	I
<i>Salix discolor</i>	pussy willow	2.5	2	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Toxicodendron rydbergii</i>	western poison ivy	2.5	2	N
<i>Trifolium repens</i>	white clover	2.5	0	I
<i>Typha x glauca</i>	hybrid cattail	2.5	0	I
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Eupatorium perfoliatum</i>	boneset	1	6	N
<i>Salix petiolaris</i>	slender willow	1	6	N
<i>Triosteum aurantiacum</i>	orange-fruit horse gentian	1	5	N
<i>Verbascum thapsus</i>	common mullein	1	0	I

Sample Name	Crew	Date	Latitude	Longitude
wasd1009f	SAM/IGL	2022-08-24	46.340565	-90.625933
Wetland Name		Community Type		
wasd1009		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
221		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
28.482	2.207	5.200	0.403
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
28.018	34.137	5.032	6.131

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Carex bromoides</i>	brome-like sedge	37.5	8	N
<i>Fraxinus nigra</i>	black ash	37.5	8	N
<i>Doellingeria umbellata</i>	flat-top aster	15	6	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Carex scabrata</i>	eastern rough sedge	15	8	N
<i>Impatiens capensis</i>	spotted touch-me-not	15	2	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Tilia americana</i>	American basswood	15	5	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Symphotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Lonicera hirsuta</i>	hairy honeysuckle	2.5	7	N
<i>Milium effusum</i> var. <i>cisatlanticum</i>	American millet grass	2.5	7	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N

<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Maianthemum racemosum</i>	false Solomon's-seal	1	5	N

Sample Name	Crew	Date	Latitude	Longitude
wasv042f	SAM/IGL	2022-08-25	46.344877	-90.616587
Wetland Name		Community Type		
wasv042		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
255		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
38.040	3.038	5.609	0.448
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
37.633	41.228	5.489	6.014

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	37.5	6	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Lycopus uniflorus</i>	northern bugleweed	15	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex trisperma</i>	three-seeded bog sedge	2.5	9	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Coptis trifolia</i>	three-leaved gold-thread	2.5	8	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N

<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Oxalis montana</i>	mountain wood-sorrel	2.5	9	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Thelypteris palustris</i>	northern marsh fern	2.5	7	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Carex deweyana subsp. deweyana</i>	Dewey's sedge	1	7	N
<i>Carex pedunculata</i>	long-stalked sedge	1	7	N
<i>Dryopteris intermedia</i>	glandular wood fern	1	7	N
<i>Ranunculus acris</i>	tall buttercup	1	0	I
<i>Tilia americana</i>	American basswood	1	5	N

Sample Name	Crew	Date	Latitude	Longitude
wasv039f	SAM/IGL	2022-08-25	46.346216	-90.614636
Wetland Name		Community Type		
wasv039		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
219.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
37.086	2.756	5.591	0.415
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
36.672	43.473	5.467	6.481

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Carex bromoides</i>	brome-like sedge	15	8	N
<i>Carex scabrata</i>	eastern rough sedge	15	8	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphytotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Circaea alpina</i> subsp. <i>alpina</i>	alpine enchanter's-nightshade	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N

<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Rumex obtusifolius</i>	bitter dock	2.5	0	I
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Acer spicatum</i>	mountain maple	1	6	N
<i>Thuja occidentalis</i>	white cedar	1	9	N

Sample Name	Crew	Date	Latitude	Longitude
wasv053f	SAM/IGL	2022-08-25	46.356727	-90.599894
Wetland Name		Community Type		
wasv053		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
258		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
33.468	2.690	5.045	0.406
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
31.086	38.434	4.353	5.382

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	15	5	N
<i>Carex scabrata</i>	eastern rough sedge	15	8	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Scirpus atrocinctus</i>	black-girdled wool-grass	15	7	N
<i>Scirpus cyperinus</i>	wool-grass	15	4	N
<i>Solidago gigantea</i>	giant goldenrod	15	3	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex plantaginea</i>	plantain-leaved sedge	2.5	10	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Deparia acrostichoides</i>	silver false spleenwort	2.5	10	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N

<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Myosotis scorpioides</i>	true forget-me-not	2.5	0	I
<i>Ostrya virginiana</i>	ironwood	2.5	5	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Quercus rubra</i>	northern red oak	2.5	5	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rumex obtusifolius</i>	bitter dock	2.5	0	I
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Tsuga canadensis</i>	eastern hemlock	2.5	8	N
<i>Typha x glauca</i>	hybrid cattail	2.5	0	I
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Acer rubrum</i>	red maple	1	3	N
<i>Agrimonia striata</i>	roadside agrimony	1	3	N
<i>Cirsium arvense</i>	Canada thistle	1	0	I

Sample Name	Crew	Date	Latitude	Longitude
wasw023ss	SAM/IGL	2022-08-30	46.366544	-90.582923
Wetland Name		Community Type		
wasw023		Alder Thicket		
Total % Cover		Total % Non-Native Cover		
214.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
38.079	2.167	5.000	0.285
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
36.830	35.075	4.677	4.455

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	15	4	N
<i>Carex bromoides</i>		15	0	
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	15	6	N
<i>Rubus pubescens</i>	dwarf raspberry	15	7	N
<i>Solidago gigantea</i>	giant goldenrod	15	3	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lanceolatum</i>	eastern lined aster	2.5	4	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex scabrata</i>	eastern rough sedge	2.5	8	N
<i>Chrysosplenium americanum</i>	American golden saxifrage	2.5	9	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N

<i>Cirsium arvense</i>	Canada thistle	2.5	0	I
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum fluviatile</i>	water horsetail	2.5	7	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Geum canadense</i>	white avens	2.5	2	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Hieracium scabrum</i>	sticky hawkweed	2.5	6	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rumex obtusifolius</i>	bitter dock	2.5	0	I
<i>Salix bebbiana</i>	Bebb's willow	2.5	7	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Stachys palustris</i>	woundwort	2.5	5	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Quercus rubra</i>	northern red oak	1	5	N
<i>Trillium cernuum</i>	nodding trillium	1	8	N

Sample Name	Crew	Date	Latitude	Longitude
wasw024f	SAM/IGL	2022-08-30	46.367079	-90.581041
Wetland Name		Community Type		
wasw024		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
301		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
37.618	3.975	5.320	0.562
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
37.247	44.782	5.216	6.271

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Carex bromoides</i>	brome-like sedge	62.5	8	N
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Equisetum sylvaticum</i>	woodland horsetail	15	7	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex radiata</i>	eastern star sedge	2.5	4	N
<i>Carex scabrata</i>	eastern rough sedge	2.5	8	N
<i>Chrysosplenium americanum</i>	American golden saxifrage	2.5	9	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Deparia acrostichoides</i>	silver false spleenwort	2.5	10	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N

<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Hieracium aurantiacum</i>	orange hawkweed	2.5	0	I
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Mitella nuda</i>	naked miterwort	2.5	9	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Actaea pachypoda</i>	doll's-eyes	1	6	N
<i>Cirsium muticum</i>	swamp thistle	1	8	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	1	1	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	1	3	N
<i>Salix discolor</i>	pussy willow	1	2	N
<i>Tilia americana</i>	American basswood	1	5	N

Sample Name	Crew	Date	Latitude	Longitude
wasw021f	SAM/IGL	2022-08-31	46.372293	-90.568487
Wetland Name		Community Type		
wasw021		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
241		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
35.737	2.055	5.213	0.300
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
35.000	30.861	5.000	4.409

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer saccharinum</i>	silver maple	37.5	2	N
<i>Ostrya virginiana</i>	ironwood	37.5	5	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Quercus rubra</i>	northern red oak	15	5	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Agrostis stolonifera</i>	spreading bentgrass	2.5	0	I
<i>Allium tricoccum</i>	wild leek	2.5	6	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	2.5	6	N
<i>Symphotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex disperma</i>	soft-leaved sedge	2.5	10	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex tuckermanii</i>	Tuckerman's sedge	2.5	8	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N

<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Leersia oryzoides</i>	rice cut grass	2.5	3	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Oryzopsis asperifolia</i>	mountain ricegrass	2.5	6	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Monotropa uniflora</i>	Ghost pipe	1	5	N

Sample Name	Crew	Date	Latitude	Longitude
wasw025f/wasw026f	SAM/IGL	2022-08-31	46.372746	-90.568137
Wetland Name		Community Type		
wasw025/wasw026		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
268.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
41.959	2.955	5.088	0.358
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
41.355	39.574	4.943	4.730

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer saccharum</i>	sugar maple	37.5	5	N
<i>Ostrya virginiana</i>	ironwood	37.5	5	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Adiantum pedatum</i>	maidenhair fern	2.5	7	N
<i>Allium tricoccum</i>	wild leek	2.5	6	N
<i>Anaphalis margaritacea</i>	pearly everlasting	2.5	3	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex arctata</i>	drooping wood sedge	2.5	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N

<i>Carex radiata</i>	eastern star sedge	2.5	4	N
<i>Carex rosea</i>	starry sedge	2.5	4	N
<i>Carex tuckermanii</i>	Tuckerman's sedge	2.5	8	N
<i>Caulophyllum thalictroides</i>	blue cohosh	2.5	8	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Geum canadense</i>	white avens	2.5	2	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Oryzopsis asperifolia</i>	mountain ricegrass	2.5	6	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Persicaria punctata</i>	dotted smartweed	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Quercus rubra</i>	northern red oak	2.5	5	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Maianthemum racemosum</i>	false Solomon's-seal	2.5	5	N

<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Typha x glauca</i>	hybrid cattail	2.5	0	I
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Pinus strobus</i>	white pine	1	5	N

Sample Name	Crew	Date	Latitude	Longitude
wasw013ss	EJO/MJF	2022-08-25	46.375677	-90.563508
Wetland Name		Community Type		
wasw013		Alder Thicket		
Total % Cover		Total % Non-Native Cover		
246		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
35.639	2.034	4.942	0.282
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
34.343	29.386	4.589	3.927

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	37.5	4	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	37.5	3	N
<i>Calamagrostis canadensis</i>	bluejoint	15	5	N
<i>Impatiens capensis</i>	spotted touch-me-not	15	2	N
<i>Phalaris arundinacea</i>	reed canary grass	15	0	I
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Actaea rubra</i>	red baneberry	2.5	7	N
<i>Symphyotrichum lanceolatum</i>	eastern lined aster	2.5	4	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Barbarea vulgaris</i>	yellow rocket	2.5	0	I
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex gynandra</i>	nodding sedge	2.5	6	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex retrorsa</i>	retrorse sedge	2.5	6	N
<i>Carex scabrata</i>	eastern rough sedge	2.5	8	N
<i>Carex utriculata</i>	beaked sedge	2.5	7	N
<i>Caulophyllum thalictroides</i>	blue cohosh	2.5	8	N
<i>Cirsium arvense</i>	Canada thistle	2.5	0	I
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Epilobium ciliatum</i>	American willow-herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N

<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Eupatorium perfoliatum</i>	boneset	2.5	6	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Galium aparine</i>	cleavers	2.5	2	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria canadensis</i> var. <i>canadensis</i>	rattlesnake grass	2.5	7	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Hypericum ascyron</i> subsp. <i>pyramidatum</i>	giant St. John's-wort	2.5	6	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Lactuca biennis</i>	biennial blue lettuce	2.5	3	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Mentha arvensis</i> var. <i>canadensis</i>	common mint	2.5	3	N
<i>Muhlenbergia mexicana</i>	Mexican muhly grass	2.5	4	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Rumex britannica</i>	great water dock	2.5	8	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Solidago canadensis</i>	Canadian goldenrod	2.5	1	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Spiraea alba</i> var. <i>alba</i>	white meadowsweet	2.5	4	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Sanguinaria canadensis</i>	bloodroot	1	6	N

Sample Name	Crew	Date	Latitude	Longitude
wasw012f	EJO/MJF	2022-08-25	46.377239	-90.560474
Wetland Name		Community Type		
wasw012		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
335		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
44.328	4.536	4.987	0.510
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
43.247	47.524	4.747	5.216

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	37.5	8	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Carex bromoides</i>	brome-like sedge	15	8	N
<i>Carex gynandra</i>	nodding sedge	15	6	N
<i>Glyceria striata</i>	fowl manna grass	15	4	N
<i>Impatiens capensis</i>	spotted touch-me-not	15	2	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Osmunda claytoniana</i>	interrupted fern	15	6	N
<i>Ulmus americana</i>	American elm	15	3	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Allium tricoccum</i>	wild leek	2.5	6	N
<i>Alnus incana subsp. rugosa</i>	speckled alder	2.5	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina var. angustum</i>	lady fern	2.5	5	N
<i>Betula papyrifera</i>	canoe birch	2.5	3	N
<i>Brachyelytrum aristosum</i>	bearded shortthusk	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N

<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex scabrata</i>	eastern rough sedge	2.5	8	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's- nightshade	2.5	2	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Clinopodium vulgare</i>	wild-basil	2.5	3	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Populus balsamifera</i>	balsam poplar	2.5	4	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Prunus serotina</i>	wild black cherry	2.5	3	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N

<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ribes americanum</i>	wild black currant	2.5	4	N
<i>Ribes cynosbati</i>	prickly gooseberry	2.5	3	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Solanum dulcamara</i>	bittersweet nightshade	2.5	0	I
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Stachys palustris</i>	woundwort	2.5	5	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Viburnum opulus</i>	cranberry viburnum	2.5	6	N
<i>Symphyotrichum ciliolatum</i>	Lindley's aster	1	4	N
<i>Oryzopsis asperifolia</i>	mountain ricegrass	1	6	N
<i>Quercus rubra</i>	northern red oak	1	5	N
<i>Maianthemum racemosum</i>	false Solomon's-seal	1	5	N
<i>Taraxacum officinale</i>	common dandelion	1	0	I

Sample Name	Crew	Date	Latitude	Longitude
wirb1002f	SAM/IGL	2022-08-25	46.382737	-90.546915
Wetland Name		Community Type		
wirb1002		Hardwood Swamp – Forested Seep		
Total % Cover		Total % Non-Native Cover		
272.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
35.851	3.372	4.925	0.463
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
35.518	42.769	4.833	5.820

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Carex scabrata</i>	eastern rough sedge	37.5	8	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	15	5	N
<i>Glyceria striata</i>	fowl manna grass	15	4	N
<i>Solidago gigantea</i>	giant goldenrod	15	3	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Circaea alpina</i> subsp. <i>alpina</i>	alpine enchanter's-nightshade	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N

<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Erechtites hieracifolia</i> var. <i>hieracifolia</i>	American burn-weed	2.5	2	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Geum canadense</i>	white avens	2.5	2	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Laportea canadensis</i>	woodnettle	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Ostrya virginiana</i>	ironwood	2.5	5	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Maianthemum racemosum</i>	false Solomon's-seal	2.5	5	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Viola labradorica</i>	alpine violet	2.5	4	N
<i>Caulophyllum thalictroides</i>	blue cohosh	1	8	N
<i>Clematis virginiana</i>	virgin's bower	1	4	N
<i>Picea glauca</i>	white spruce	1	7	N
<i>Quercus rubra</i>	northern red oak	1	5	N
<i>Salix discolor</i>	pussy willow	1	2	N

Sample Name	Crew	Date	Latitude	Longitude
wirb1005f	SAM/IGL	2022-08-25	46.383981	-90.546398
Wetland Name		Community Type		
wirb1005		Hardwood Swamp (Vernal Pool Subtype)		
Total % Cover		Total % Non-Native Cover		
142.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
16.166	0.931	4.667	0.269
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
15.532	23.278	4.308	6.456

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	87.5	8	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Ulmus americana</i>	American elm	15	3	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I

Sample Name	Crew	Date	Latitude	Longitude
wirb1006f	SAM/IGL	2022-08-27	46.384815	-90.546337
Wetland Name		Community Type		
wirb1006		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
228.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
30.832	1.821	4.875	0.288
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
28.444	28.998	4.149	4.230

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer saccharum</i>	sugar maple	62.5	5	N
<i>Fraxinus pennsylvanica</i>	green ash	37.5	2	N
<i>Fraxinus nigra</i>	black ash	15	8	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	15	3	N
<i>Allium tricoccum</i>	wild leek	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Calystegia sepium</i>	hedge bindweed	2.5	2	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex scabrata</i>	eastern rough sedge	2.5	8	N
<i>Caulophyllum thalictroides</i>	blue cohosh	2.5	8	N
<i>Cirsium arvense</i>	Canada thistle	2.5	0	I
<i>Deparia acrostichoides</i>	silver false spleenwort	2.5	10	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lapsana communis</i>	nipplewort	2.5	0	I
<i>Leersia oryzoides</i>	rice cut grass	2.5	3	N

<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes cynosbati</i>	prickly gooseberry	2.5	3	N
<i>Rumex obtusifolius</i>	bitter dock	2.5	0	I
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Maianthemum racemosum</i>	false Solomon's-seal	2.5	5	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Uvularia grandiflora</i>	large-flowered bellwort	2.5	7	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Viola labradorica</i>	alpine violet	2.5	4	N
<i>Cf Barbarea vulgaris</i>		1	0	
<i>Epilobium coloratum</i>	purple-leaved willow herb	1	3	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	1	4	N
<i>Juncus effusus</i>	common rush	1	4	N
<i>Quercus rubra</i>	northern red oak	1	5	N
<i>Ulmus americana</i>	American elm	1	3	N

Sample Name	Crew	Date	Latitude	Longitude
wirb1007f	SAM/IGL	2022-08-30	46.387577	-90.545171
Wetland Name		Community Type		
wirb1007		Hardwood Swamp – Forested Seep		
Total % Cover		Total % Non-Native Cover		
304		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
46.765	4.214	5.400	0.487
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
45.280	50.738	5.063	5.673

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	15	5	N
<i>Carex scabrata</i>	eastern rough sedge	15	8	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex radiata</i>	eastern star sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Caulophyllum thalictroides</i>	blue cohosh	2.5	8	N
<i>Circaea alpina</i> subsp. <i>alpina</i>	alpine enchanter's-nightshade	2.5	7	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N

<i>Clinopodium vulgare</i>	wild-basil	2.5	3	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Deparia acrostichoides</i>	silver false spleenwort	2.5	10	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum hyemale subsp. affine</i>	common scouring rush	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum scirpoides</i>	dwarf scouring rush	2.5	7	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lapsana communis</i>	nipplewort	2.5	0	I
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lonicera hirsuta</i>	hairy honeysuckle	2.5	7	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Mitella nuda</i>	naked miterwort	2.5	9	N
<i>Myosotis scorpioides</i>	true forget-me-not	2.5	0	I
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Ostrya virginiana</i>	ironwood	2.5	5	N
<i>Packera aurea</i>	golden ragwort	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Polystichum braunii</i>	Braun's holly fern	2.5	10	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Quercus rubra</i>	northern red oak	2.5	5	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ribes cynosbati</i>	prickly gooseberry	2.5	3	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N

<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Rumex obtusifolius</i>	bitter dock	2.5	0	I
<i>Micranthes pensylvanica</i>	eastern swamp saxifrage	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Maianthemum racemosum</i>	false Solomon's-seal	2.5	5	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Thuja occidentalis</i>	white cedar	2.5	9	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trillium cernuum</i>	nodding trillium	2.5	8	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Uvularia grandiflora</i>	large-flowered bellwort	2.5	7	N
<i>Viola labradorica</i>	alpine violet	2.5	4	N
<i>Symphotrichum ciliolatum</i>	Lindley's aster	1	4	N
<i>Epipactis helleborine</i>	helleborine	1	0	I
<i>Prenanthes alba</i>	white rattlesnakeroot	1	5	N
<i>Prunus serotina</i>	wild black cherry	1	3	N

Sample Name	Crew	Date	Latitude	Longitude
wirb009f_x	SAM/IGL	2022-09-02	46.39271	-90.545204
Wetland Name		Community Type		
wirb009_x		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
224.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
28.277	1.398	4.649	0.230
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
27.902	22.365	4.526	3.628

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Populus tremuloides</i>	quaking aspen	62.5	2	N
<i>Fraxinus pennsylvanica</i>	green ash	37.5	2	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	15	5	N
<i>Rubus pubescens</i>	dwarf raspberry	15	7	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Agrostis</i> cf. <i>perennans</i>	autumn bent grass	2.5	4	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	2.5	6	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Caulophyllum thalictroides</i>	blue cohosh	2.5	8	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epipactis helleborine</i>	helleborine	2.5	0	I
<i>Equisetum arvense</i>	field horsetail	2.5	1	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N

<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Ostrya virginiana</i>	ironwood	2.5	5	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Polygonatum pubescens</i>	hairy Solomon's seal	2.5	6	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Micranthes pensylvanica</i>	eastern swamp saxifrage	2.5	7	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	1	6	N
<i>Caltha palustris</i>	common marsh marigold	1	6	N

Sample Name	Crew	Date	Latitude	Longitude
wirb015e	SAM/IGL	2022-08-30	46.396739	-90.542695
Wetland Name		Community Type		
wirb015		Fresh Meadow (Native Subtype)		
Total % Cover		Total % Non-Native Cover		
233.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
31.466	1.950	4.542	0.281
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
29.666	29.740	4.037	4.047

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Alisma triviale</i>	common water plantain	15	4	N
<i>Bidens cernua</i>	nodding bur-marigold	15	4	N
<i>Eupatorium perfoliatum</i>	boneset	15	6	N
<i>Impatiens capensis</i>	spotted touch-me-not	15	2	N
<i>Juncus effusus</i>	common rush	15	4	N
<i>Scirpus cyperinus</i>	wool-grass	15	4	N
<i>Sparganium angustifolium</i>	branching bur-reed	15	8	N
<i>Typha x glauca</i>	hybrid cattail	15	0	I
<i>Agrostis gigantea</i>	redtop	2.5	0	I
<i>Agrostis scabra</i>		2.5	0	
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Asclepias incarnata</i>	swamp milkweed	2.5	5	N
<i>Symphyotrichum lanceolatum</i>	eastern lined aster	2.5	4	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex comosa</i>	bristly sedge	2.5	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Cirsium arvense</i>	Canada thistle	2.5	0	I
<i>Cirsium muticum</i>	swamp thistle	2.5	8	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Eleocharis obtusa</i>	blunt spike-rush	2.5	3	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N

<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium obtusum</i>	blunt-leaf bedstraw	2.5	6	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Hypericum majus</i>	large St. John's wort	2.5	5	N
<i>Lycopus americanus</i>	cut-leaved bugleweed	2.5	4	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Mentha arvensis</i> var. <i>canadensis</i>	common mint	2.5	3	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Persicaria lapathifolia</i>	curly-top knotweed	2.5	2	N
<i>Persicaria punctata</i>	dotted smartweed	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Potentilla norvegica</i>	rough cinquefoil	2.5	0	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rumex britannica</i>	great water dock	2.5	8	N
<i>Sagittaria latifolia</i> var. <i>latifolia</i>	broad-leaved arrowhead	2.5	3	N
<i>Salix bebbiana</i>	Bebb's willow	2.5	7	N
<i>Salix discolor</i>	pussy willow	2.5	2	N
<i>Salix petiolaris</i>	slender willow	2.5	6	N
<i>Schoenoplectus tabernaemontani</i>	great bulrush	2.5	4	N
<i>Scirpus atrocinctus</i>	black-girdled wool-grass	2.5	7	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Scirpus microcarpus</i>	panicled bulrush	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thelypteris palustris</i>	northern marsh fern	2.5	7	N
<i>Utricularia vulgaris</i>	common bladderwort	2.5	7	N
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Carex (ovales)</i>		1	0	

Sample Name	Crew	Date	Latitude	Longitude
wird026f	SAM/IGL	2022-08-26	46.407611	-90.532699
Wetland Name		Community Type		
wird026		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
259.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
38.796	2.277	5.051	0.296
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
38.155	35.169	4.885	4.503

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Populus tremuloides</i>	quaking aspen	62.5	2	N
<i>Calamagrostis canadensis</i>	bluejoint	15	5	N
<i>Equisetum pratense</i>	meadow horsetail	15	9	N
<i>Fraxinus nigra</i>	black ash	15	8	N
<i>Solidago gigantea</i>	giant goldenrod	15	3	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex scabrata</i>	eastern rough sedge	2.5	8	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N

<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Hieracium aurantiacum</i>	orange hawkweed	2.5	0	I
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Lamium amplexicaule</i>	henbit	2.5	0	I
<i>Lonicera hirsuta</i>	hairy honeysuckle	2.5	7	N
<i>Lysimachia ciliata</i>	fringed loosestrife	2.5	5	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Ostrya virginiana</i>	ironwood	2.5	5	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes cynosbati</i>	prickly gooseberry	2.5	3	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Micranthes pensylvanica</i>	eastern swamp saxifrage	2.5	7	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trillium cernuum</i>	nodding trillium	2.5	8	N
<i>Triosteum aurantiacum</i>	orange-fruit horse gentian	2.5	5	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Viburnum rafinesquianum</i>	downy arrowwood	2.5	7	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	1	1	N
<i>Smilax ecirrhata</i>	erect carrion flower	1	5	N

Sample Name	Crew	Date	Latitude	Longitude
wird027f	SAM/IGL	2022-08-26	46.411139	-90.528307
Wetland Name		Community Type		
wird027		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
342		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
49.889	4.230	5.318	0.451
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
49.332	49.293	5.200	5.196

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Populus tremuloides</i>	quaking aspen	37.5	2	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Solidago gigantea</i>	giant goldenrod	15	3	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Alnus incana subsp. rugosa</i>	speckled alder	2.5	4	N
<i>Anemone americana</i>	round-lobed hepatica	2.5	7	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex crinita var. crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N

<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex retrorsa</i>	retrorse sedge	2.5	6	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Coptis trifolia</i>	three-leaved gold-thread	2.5	8	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Cornus racemosa</i>	gray dogwood	2.5	2	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Cypripedium parviflorum</i>	yellow lady's-slipper	2.5	9	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Elymus virginicus</i> var. <i>virginicus</i>	common eastern wild-rye	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Geum canadense</i>	white avens	2.5	2	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Lactuca biennis</i>	biennial blue lettuce	2.5	3	N
<i>Laportea canadensis</i>	woodnettle	2.5	4	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lonicera hirsuta</i>	hairy honeysuckle	2.5	7	N
<i>Luzula acuminata</i> var. <i>acuminata</i>	hairy wood rush	2.5	6	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Oryzopsis asperifolia</i>	mountain ricegrass	2.5	6	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Packera aurea</i>	golden ragwort	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Picea glauca</i>	white spruce	2.5	7	N

<i>Persicaria punctata</i>	dotted smartweed	2.5	5	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ribes glandulosum</i>	skunk currant	2.5	7	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Salix discolor</i>	pussy willow	2.5	2	N
<i>Micranthes pensylvanica</i>	eastern swamp saxifrage	2.5	7	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Maianthemum trifolium</i>	false mayflower	2.5	10	N
<i>Smilax ecirrhata</i>	erect carrion flower	2.5	5	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Thuja occidentalis</i>	white cedar	2.5	9	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis</i> subsp. <i>borealis</i>	American starflower	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Viburnum opulus</i>	cranberry viburnum	2.5	6	N
<i>Viola labradorica</i>	alpine violet	2.5	4	N
<i>Quercus rubra</i>	northern red oak	1	5	N
<i>Salix bebbiana</i>	Bebb's willow	1	7	N

Sample Name	Crew	Date	Latitude	Longitude
wire1001f	SAM/IGL	2022-08-26	46.412531	-90.528483
Wetland Name		Community Type		
wire1001		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
250.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
37.774	2.744	5.189	0.377
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
37.423	43.577	5.093	5.930

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	87.5	8	N
<i>Glyceria striata</i>	fowl manna grass	15	4	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Solidago gigantea</i>	giant goldenrod	15	3	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Calamagrostis stricta</i>	slimstem reedgrass	2.5	7	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex radiata</i>	eastern star sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N

<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Eupatorium perfoliatum</i>	boneset	2.5	6	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Laportea canadensis</i>	woodnettle	2.5	4	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Muhlenbergia Mexicana</i>		2.5	4	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Packera aurea</i>	golden ragwort	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Petasites frigidus var. sagittatus</i>	arrowhead sweet-colt's-foot	2.5	8	N
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Platanthera huronensis</i>	Huron green orchid	2.5	7	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Micranthes pensylvanica</i>	eastern swamp saxifrage	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Geum canadense</i>	white avens	1	2	N
<i>Lactuca biennis</i>	biennial blue lettuce	1	3	N
<i>Ribes triste</i>	swamp red currant	1	8	N
<i>Carex gracillima</i>	graceful sedge	0	5	N

Sample Name	Crew	Date	Latitude	Longitude
wire1001e	SAM/IGL	2022-08-26	46.412258	-90.528376
Wetland Name		Community Type		
wire1001		Fresh Meadow (Native Subtype)		
Total % Cover		Total % Non-Native Cover		
167.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
23.452	0.610	5.000	0.130
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
22.454	14.989	4.583	3.060

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Phalaris arundinacea</i>	reed canary grass	62.5	0	I
<i>Calamagrostis canadensis</i>	bluejoint	37.5	5	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Alisma triviale</i>	common water plantain	2.5	4	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Alopecurus aequalis</i>	short-awned foxtail	2.5	4	N
<i>Symphotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Bidens cernua</i>	nodding bur-marigold	2.5	4	N
<i>Cardamine pensylvanica</i>	Pensylvania bitter cress	2.5	3	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Eupatorium perfoliatum</i>	boneset	2.5	6	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Petasites frigidus</i> var. <i>sagittatus</i>	arrowhead sweet-colt's-foot	2.5	8	N
<i>Rumex britannica</i>	great water dock	2.5	8	N
<i>Salix petiolaris</i>	slender willow	2.5	6	N
<i>Typha x glauca</i>	hybrid cattail	2.5	0	I

Sample Name	Crew	Date	Latitude	Longitude
wird028f	SAM/IGL	2022-08-26	46.411663	-90.525798
Wetland Name		Community Type		
wird028		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
314.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
48.138	3.997	5.161	0.429
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
47.594	50.665	5.045	5.370

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Populus tremuloides</i>	quaking aspen	15	2	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Acer spicatum</i>	mountain maple	2.5	6	N
<i>Alnus incana subsp. rugosa</i>	speckled alder	2.5	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina var. angustum</i>	lady fern	2.5	5	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex leptalea subsp. leptalea</i>	slender sedge	2.5	9	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex radiata</i>	eastern star sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N

<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Clintonia borealis</i>	bluebead lily	2.5	7	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Epilobium leptophyllum</i>	linear-leaved willow herb	2.5	8	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Helianthus giganteus</i>	giant sunflower	2.5	4	N
<i>Hieracium umbellatum</i>	Canada hawkweed	2.5	5	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Lactuca biennis</i>	biennial blue lettuce	2.5	3	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Mitella nuda</i>	naked miterwort	2.5	9	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Packera aurea</i>	golden ragwort	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Prunus serotina</i>	wild black cherry	2.5	3	N

<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes cynosbati</i>	prickly gooseberry	2.5	3	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Rumex britannica</i>	great water dock	2.5	8	N
<i>Micranthes pensylvanica</i>	eastern swamp saxifrage	2.5	7	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Trientalis borealis</i> subsp. <i>borealis</i>	American starflower	2.5	7	N
<i>Trillium cernuum</i>	nodding trillium	2.5	8	N
<i>Triosteum aurantiacum</i>	orange-fruit horse gentian	2.5	5	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Viburnum lentago</i>	nannyberry	2.5	4	N
<i>Viola labradorica</i>	alpine violet	2.5	4	N
<i>Monotropa uniflora</i>	Ghost pipe	1	5	N
<i>Thuja occidentalis</i>	white cedar	1	9	N
<i>Salix bebbiana</i>	Bebb's willow	0	7	N

Sample Name	Crew	Date	Latitude	Longitude
wirb046f	SAM/IGL	2022-08-26	46.414342	-90.522614
Wetland Name		Community Type		
wirb046		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
235.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
28.991	1.907	5.125	0.337
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
28.549	28.162	4.970	4.902

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Populus tremuloides</i>	quaking aspen	62.5	2	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	15	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphiotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N

<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Abies balsamea</i>	balsam fir	1	5	N
<i>Agrimonia striata</i>	roadside agrimony	1	3	N
<i>Spiraea alba</i> var. <i>alba</i>	white meadowsweet	1	4	N

Sample Name	Crew	Date	Latitude	Longitude
wirb044f	SAM/IGL	2022-08-27	46.415873	-90.521197
Wetland Name		Community Type		
wirb044		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
237		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
39.238	3.027	5.291	0.408
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
38.210	44.040	5.017	5.783

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Populus tremuloides</i>	quaking aspen	15	2	N
<i>Rubus pubescens</i>	dwarf raspberry	15	7	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Abutilon theophrasti</i>	velvet leaf	2.5	0	I
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Agrostis</i> cf. <i>perennans</i>	autumn bent grass	2.5	4	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N

<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Polygonatum pubescens</i>	hairy Solomon's seal	2.5	6	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ribes glandulosum</i>	skunk currant	2.5	7	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Scirpus atrocinctus</i>	black-girdled wool-grass	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Trientalis borealis</i> subsp. <i>borealis</i>	American starflower	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Taraxacum officinale</i>	common dandelion	1	0	I
<i>Trillium cernuum</i>	nodding trillium	1	8	N
<i>Calamagrostis canadensis</i>	bluejoint	0	5	N

Sample Name	Crew	Date	Latitude	Longitude
wirb042f	SAM/IGL	2022-08-27	46.41749	-90.52086
Wetland Name		Community Type		
wirb042		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
264		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
37.086	2.760	5.591	0.416
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
37.086	41.207	5.591	6.212

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	87.5	8	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	15	5	N
<i>Calamagrostis canadensis</i>	bluejoint	15	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Populus tremuloides</i>	quaking aspen	15	2	N
<i>Rubus pubescens</i>	dwarf raspberry	15	7	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Agrostis</i> cf. <i>perennans</i>	autumn bent grass	2.5	4	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex leptalea</i> subsp. <i>leptalea</i>	slender sedge	2.5	9	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Clintonia borealis</i>	bluebead lily	2.5	7	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N

<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Packera aurea</i>	golden ragwort	2.5	6	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Viburnum lentago</i>	nannyberry	2.5	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	1	5	N
<i>Picea glauca</i>	white spruce	1	7	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	1	1	N
<i>Ribes glandulosum</i>	skunk currant	1	7	N

Sample Name	Crew	Date	Latitude	Longitude
wirb039s	SAM/IGL	2022-08-27	46.41858	-90.519357
Wetland Name		Community Type		
wirb039		Shrub-Carr		
Total % Cover		Total % Non-Native Cover		
218.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
34.059	1.898	5.022	0.280
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
33.342	34.974	4.813	5.048

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Doellingeria umbellata</i>	flat-top aster	15	6	N
<i>Calamagrostis canadensis</i>	bluejoint	15	5	N
<i>Fraxinus nigra</i>	black ash	15	8	N
<i>Ilex verticillata</i>	common winterberry	15	7	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Populus tremuloides</i>	quaking aspen	15	2	N
<i>Salix petiolaris</i>	slender willow	15	6	N
<i>Scirpus cyperinus</i>	wool-grass	15	4	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Alnus incana subsp. rugosa</i>	speckled alder	2.5	4	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Athyrium filix-femina var. angustum</i>	lady fern	2.5	5	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus inermis</i>	smooth brome	2.5	0	I
<i>Carex crinita var. crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N

<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Epilobium leptophyllum</i>	linear-leaved willow herb	2.5	8	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Salix pyrifolia</i>	balsam willow	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Solidago uliginosa</i>	bog goldenrod	1	8	N

Sample Name	Crew	Date	Latitude	Longitude
wirb037s	SAM/IGL	2022-08-27	46.422891	-90.516265
Wetland Name		Community Type		
wirb037		Shrub-Carr		
Total % Cover		Total % Non-Native Cover		
204.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
34.701	1.787	4.722	0.243
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
33.776	35.386	4.474	4.687

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Matteuccia struthiopteris</i>	American ostrich fern	37.5	5	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	15	4	N
<i>Galium asprellum</i>	rough bedstraw	15	7	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Agrostis gigantea</i>	redtop	2.5	0	I
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Allium tricoccum</i>	wild leek	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Cirsium muticum</i>	swamp thistle	2.5	8	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Elymus virginicus</i> var. <i>virginicus</i>	common eastern wild-rye	2.5	6	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N

<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Helianthus giganteus</i>	giant sunflower	2.5	4	N
<i>Humulus lupulus</i>	common hops	2.5	3	N
<i>Hypericum majus</i>	large St. John's wort	2.5	5	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Lobelia siphilitica</i>	great lobelia	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Plantago major</i>	common plantain	2.5	0	I
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Prunus serotina</i>	wild black cherry	2.5	3	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes glandulosum</i>	skunk currant	2.5	7	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Maianthemum racemosum</i>	false Solomon's-seal	2.5	5	N
<i>Smilax ecirrhata</i>	erect carrion flower	2.5	5	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Viburnum lentago</i>	nannyberry	2.5	4	N
<i>Viburnum opulus</i>	cranberry viburnum	2.5	6	N
<i>Viola labradorica</i>	alpine violet	2.5	4	N
<i>Abies balsamea</i>	balsam fir	1	5	N
<i>Asclepias incarnata</i>	swamp milkweed	1	5	N
<i>Carex intumescens</i>	bladder sedge	1	5	N
<i>Carex lupulina</i>	hop umbrella sedge	1	6	N
<i>Platanthera huronensis</i>	Huron green orchid	1	7	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	1	3	N
<i>Tilia americana</i>	American basswood	1	5	N

Sample Name	Crew	Date	Latitude	Longitude
wirc023f	SAM/IGL	2022-08-29	46.423648	-90.516565
Wetland Name		Community Type		
wirc023		Floodplain Forest		
Total % Cover		Total % Non-Native Cover		
226.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
35.802	2.161	4.661	0.281
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
35.502	32.301	4.583	4.170

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus pennsylvanica</i>	green ash	37.5	2	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Acer saccharinum</i>	silver maple	15	2	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Carex lupulina</i>	hop umbrella sedge	15	6	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	15	5	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Alisma triviale</i>	common water plantain	2.5	4	N
<i>Allium tricoccum</i>	wild leek	2.5	6	N
<i>Asclepias incarnata</i>	swamp milkweed	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Bidens cernua</i>	nodding bur-marigold	2.5	4	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex tuckermanii</i>	Tuckerman's sedge	2.5	8	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Clinopodium vulgare</i>	wild-basil	2.5	3	N
<i>Eleocharis obtusa</i>	blunt spike-rush	2.5	3	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Elymus virginicus</i> var. <i>virginicus</i>	common eastern wild-rye	2.5	6	N

<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Helianthus giganteus</i>	giant sunflower	2.5	4	N
<i>Hypericum perforatum</i>	common St. John's-wort	2.5	0	I
<i>Laportea canadensis</i>	woodnettle	2.5	4	N
<i>Leersia oryzoides</i>	rice cut grass	2.5	3	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Lysimachia ciliata</i>	fringed loosestrife	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Persicaria pensylvanica</i>	Pennsylvania knotweed	2.5	1	N
<i>Persicaria punctata</i>	dotted smartweed	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Sagittaria latifolia</i> var. <i>latifolia</i>	broad-leaved arrowhead	2.5	3	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Uvularia sessilifolia</i>	pale bellwort	2.5	6	N
<i>Acer rubrum</i>	red maple	1	3	N
<i>Bromus ciliatus</i>	fringed brome	1	7	N
<i>Carex pedunculata</i>	long-stalked sedge	1	7	N
<i>Cicuta bulbifera</i>	bulb-bearing water hemlock	1	7	N
<i>Galium triflorum</i>	fragrant bedstraw	1	5	N
<i>Heracleum lanatum</i>	cow parsnip	1	3	N
<i>Mimulus ringens</i>	Monkey-flower	1	6	N
<i>Oxalis stricta</i>	yellow wood-sorrel	1	0	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	1	3	N
<i>Ranunculus recurvatus</i>	blisterwort	1	5	N
<i>Smilax ecirrhata</i>	erect carrion flower	1	5	N
<i>Thuja occidentalis</i>	white cedar	1	9	N
<i>Verbena hastata</i>	blue vervain	1	3	N
<i>Viburnum lentago</i>	nannyberry	1	4	N

Sample Name	Crew	Date	Latitude	Longitude
wirc022f	SAM/IGL	2022-08-29	46.42363	-90.515707
Wetland Name		Community Type		
wirc022		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
164.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
31.786	1.428	4.905	0.220
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
30.373	30.510	4.478	4.498

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer saccharum</i>	sugar maple	37.5	5	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Anemone canadensis</i>	canada anemone	2.5	4	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum firmum</i>	shining aster	2.5	6	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex lupulina</i>	hop umbrella sedge	2.5	6	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Clinopodium vulgare</i>	wild-basil	2.5	3	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N

<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lapsana communis</i>	nipplewort	2.5	0	I
<i>Lysimachia ciliata</i>	fringed loosestrife	2.5	5	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Rumex obtusifolius</i>	bitter dock	2.5	0	I
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Agrimonia striata</i>	roadside agrimony	1	3	N
<i>Carex stipata</i>	common fox sedge	1	2	N
<i>Cicuta maculata</i>	common water-hemlock	1	6	N
<i>Galium triflorum</i>	fragrant bedstraw	1	5	N
<i>Ranunculus acris</i>	tall buttercup	1	0	I
<i>Ulmus americana</i>	American elm	1	3	N
<i>Viburnum opulus</i>	cranberry viburnum	1	6	N

Sample Name	Crew	Date	Latitude	Longitude
wirc021f	SAM/IGL	2022-08-29	46.425058	-90.514682
Wetland Name		Community Type		
wirc021		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
247		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
33.690	2.807	5.022	0.418
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
33.322	38.580	4.913	5.688

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Carex tuckermanii</i>	Tuckerman's sedge	15	8	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Ilex verticillata</i>	common winterberry	15	7	N
<i>Toxicodendron rydbergii</i>	western poison ivy	15	2	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Agrostis</i> cf. <i>perennans</i>	autumn bent grass	2.5	4	N
<i>Symphotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Calystegia sepium</i>	hedge bindweed	2.5	2	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex leptalea</i> subsp. <i>leptalea</i>	slender sedge	2.5	9	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Geum canadense</i>	white avens	2.5	2	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N

<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda regalis</i> var. <i>spectabilis</i>	royal fern	2.5	7	N
<i>Ostrya virginiana</i>	ironwood	2.5	5	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Salix bebbiana</i>	Bebb's willow	2.5	7	N
<i>Salix petiolaris</i>	slender willow	2.5	6	N
<i>Scirpus atrocinctus</i>	black-girdled wool-grass	2.5	7	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Maianthemum racemosum</i>	false Solomon's-seal	2.5	5	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	1	5	N
<i>Tilia americana</i>	American basswood	1	5	N

Sample Name	Crew	Date	Latitude	Longitude
wirc024f	SAM/IGL	2022-08-29	46.425678	-90.514702
Wetland Name		Community Type		
wirc024		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
204		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
33.468	2.288	5.657	0.387
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
33.000	38.191	5.500	6.365

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Acer saccharum</i>	sugar maple	37.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Lonicera canadensis</i>	fly honeysuckle	15	8	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Allium tricoccum</i>	wild leek	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N

<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Ostrya virginiana</i>	ironwood	2.5	5	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Picea glauca</i>	white spruce	1	7	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	1	3	N
<i>Trillium cernuum</i>	nodding trillium	1	8	N
<i>Tsuga canadensis</i>	eastern hemlock	1	8	N

Sample Name	Crew	Date	Latitude	Longitude
wirc025f	SAM/IGL	2022-08-29	46.426584	-90.513138
Wetland Name		Community Type		
wirc025		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
233.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
40.489	3.053	5.271	0.397
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
40.150	44.270	5.183	5.715

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Brachyelytrum aristosum</i>	bearded shortusk	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex crinita var. crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex rosea</i>	starry sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N

<i>Circaea lutetiana</i>	broad-leaf enchanter's-nightshade	2.5	2	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Geum canadense</i>	white avens	2.5	2	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Leersia oryzoides</i>	rice cut grass	2.5	3	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ranunculus recurvatus</i>	hooked buttercup	2.5	5	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis</i> subsp. <i>borealis</i>	American starflower	2.5	7	N
<i>Trillium cernuum</i>	nodding trillium	2.5	8	N
<i>Tsuga canadensis</i>	eastern hemlock	2.5	8	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Picea glauca</i>	white spruce	1	7	N

Sample Name	Crew	Date	Latitude	Longitude
wirc013f_x	SAM/IGL	2022-09-01	46.430338	-90.50956
Wetland Name		Community Type		
wirc013_x		Coniferous Swamp		
Total % Cover		Total % Non-Native Cover		
335.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
55.245	5.338	5.791	0.560
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
54.647	57.000	5.667	5.911

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Abies balsamea</i>	balsam fir	37.5	5	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Acer spicatum</i>	mountain maple	2.5	6	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex bromoides</i>		2.5	8	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex leptalea</i>		2.5	9	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex rosea</i>	starry sedge	2.5	4	N
<i>Carex stipata</i>		2.5	2	N

<i>Carex trisperma</i>	three-seeded bog sedge	2.5	9	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Chrysosplenium americanum</i>	American golden saxifrage	2.5	9	N
<i>Cicuta bulbifera</i>	bulb-bearing water hemlock	2.5	7	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Circaea alpina subsp. alpina</i>	alpine enchanter's-nightshade	2.5	7	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Clintonia borealis</i>	bluebead lily	2.5	7	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Geum rivale</i>	purple avens	2.5	8	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lactuca biennis</i>	biennial blue lettuce	2.5	3	N
<i>Laportea canadensis</i>	woodnettle	2.5	4	N
<i>Linnaea borealis subsp. americana</i>	twinflower	2.5	9	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Mitella nuda</i>	naked miterwort	2.5	9	N
<i>Moneses uniflora subsp. uniflora</i>	one-flowered pyrola	2.5	9	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Orthilia secunda</i>	one-sided shin-leaf	2.5	7	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N

<i>Oxalis montana</i>	mountain wood-sorrel	2.5	9	N
<i>Packera aurea</i>	golden ragwort	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Platanthera psycodes</i>	lesser purple fringed orchid	2.5	7	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ribes americanum</i>	wild black currant	2.5	4	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scutellaria galericulata</i>	marsh skullcap	2.5	5	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Maianthemum trifolium</i>	false mayflower	2.5	10	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Taxus canadensis</i>	Canada yew	2.5	10	N
<i>Thuja occidentalis</i>	white cedar	2.5	9	N
<i>Toxicodendron rydbergii</i>	western poison ivy	2.5	2	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Trillium cernuum</i>	nodding trillium	2.5	8	N
<i>Tsuga canadensis</i>	eastern hemlock	2.5	8	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Viburnum lentago</i>	nannyberry	2.5	4	N
<i>Viola macloskeyi subsp. pallens</i>	small white violet	2.5	7	N
<i>Acer saccharum</i>	sugar maple	1	5	N
<i>Coptis trifolia</i>	three-leaved gold-thread	1	8	N
<i>Pinus strobus</i>	white pine	1	5	N

Sample Name	Crew	Date	Latitude	Longitude
wirc1022f	SAM/IGL	2022-08-27	46.432266	-90.507754
Wetland Name		Community Type		
wirc1022		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
161		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
19.203	1.288	4.190	0.281
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
19.203	26.869	4.190	5.863

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Carex tuckermanii</i>	Tuckerman's sedge	87.5	8	N
<i>Calystegia sepium</i>	hedge bindweed	15	2	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Cardamine pensylvanica</i>	Pennsylvania bitter cress	2.5	3	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex tenera</i>	marsh straw sedge	2.5	4	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Laportea canadensis</i>	woodnettle	2.5	4	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Juncus effusus</i>	common rush	1	4	N

Sample Name	Crew	Date	Latitude	Longitude
wirc1019f	EJO/MJF	2022-08-27	46.433434	-90.505773
Wetland Name		Community Type		
wirc1019		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
336		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
42.836	4.337	5.273	0.534
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
42.515	43.667	5.194	5.335

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer rubrum</i>	red maple	37.5	3	N
<i>Fraxinus nigra</i>	black ash	37.5	8	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Calamagrostis canadensis</i>	bluejoint	15	5	N
<i>Carex brunnescens</i>	green bog sedge	15	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Lycopus uniflorus</i>	northern bugleweed	15	4	N
<i>Osmunda cinnamomea</i>	cinnamon fern	15	7	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Agrostis</i> cf. <i>perennans</i>	autumn bent grass	2.5	4	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lanceolatum</i>	eastern lined aster	2.5	4	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Carex canescens</i>	silvery sedge	2.5	8	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex leptalea</i> subsp. <i>leptalea</i>	slender sedge	2.5	9	N

<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Carex tenera</i>	marsh straw sedge	2.5	4	N
<i>Carex trisperma</i>	three-seeded bog sedge	2.5	9	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Clintonia borealis</i>	bluebead lily	2.5	7	N
<i>Coptis trifolia</i>	three-leaved gold-thread	2.5	8	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Epilobium ciliatum</i>	American willow-herb	2.5	3	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Eupatorium perfoliatum</i>	boneset	2.5	6	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Lactuca biennis</i>	biennial blue lettuce	2.5	3	N
<i>Lycopodium annotinum</i>	bristly clubmoss	2.5	7	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Oxalis montana</i>	mountain wood-sorrel	2.5	9	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Fallopia cilinodis</i>	black-fringe bindweed	2.5	1	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Prunus serotina</i>	wild black cherry	2.5	3	N
<i>Ribes glandulosum</i>	skunk currant	2.5	7	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thuja occidentalis</i>	white cedar	2.5	9	N

<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Tsuga canadensis</i>	eastern hemlock	2.5	8	N
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Galeopsis tetrahit</i>	hemp nettle	1	0	I

Sample Name	Crew	Date	Latitude	Longitude
wirc014f_x	SAM/IGL	2022-09-01	46.434721	-90.502863
Wetland Name		Community Type		
wirc014_x		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
223.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
35.299	2.617	5.149	0.382
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
35.299	41.502	5.149	6.054

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	62.5	8	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Agrostis</i> cf. <i>perennans</i>	autumn bent grass	2.5	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex disperma</i>	soft-leaved sedge	2.5	10	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex leptalea</i> subsp. <i>leptalea</i>	slender sedge	2.5	9	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Coptis trifolia</i>	three-leaved gold-thread	2.5	8	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N

<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Geum canadense</i>	white avens	2.5	2	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thuja occidentalis</i>	white cedar	2.5	9	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Tsuga canadensis</i>	eastern hemlock	1	8	N
<i>Lactuca biennis</i>	biennial blue lettuce	0	3	N

Sample Name	Crew	Date	Latitude	Longitude
wirc014e	EJO/MJF	2022-08-26	46.435035	-90.501469
Wetland Name		Community Type		
wirc014		Fresh Meadow (Disturbed Subtype)		
Total % Cover		Total % Non-Native Cover		
339.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
36.435	3.023	4.485	0.372
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
33.515	33.142	3.795	3.753

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Solidago canadensis</i>	Canadian goldenrod	37.5	1	N
<i>Doellingeria umbellata</i>	flat-top aster	15	6	N
<i>Calamagrostis canadensis</i>	bluejoint	15	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Carex gynandra</i>	nodding sedge	15	6	N
<i>Clematis virginiana</i>	virgin's bower	15	4	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	15	4	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Salix discolor</i>	pussy willow	15	2	N
<i>Solidago gigantea</i>	giant goldenrod	15	3	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Agrostis gigantea</i>	redtop	2.5	0	I
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Apocynum androsaemifolium</i>	spreading dogbane	2.5	2	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex scoparia</i> var. <i>scoparia</i>	lance-fruited oval sedge	2.5	4	N
<i>Carex vulpinoidea</i>	fox sedge	2.5	2	N
<i>Cicuta maculata</i>	common water-hemlock	2.5	6	N

<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Dactylis glomerata</i>	orchard grass	2.5	0	I
<i>Diervilla lonicera</i>	bush honeysuckle	2.5	6	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Epilobium ciliatum</i>	American willow-herb	2.5	3	N
<i>Equisetum hyemale subsp. affine</i>	common scouring rush	2.5	3	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum variegatum subsp. variegatum</i>	variegated horsetail	2.5	7	N
<i>Erigeron annuus</i>	annual fleabane	2.5	0	N
<i>Eupatorium perfoliatum</i>	boneset	2.5	6	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria canadensis var. canadensis</i>	rattlesnake grass	2.5	7	N
<i>Glyceria grandis var. grandis</i>	American manna grass	2.5	6	N
<i>Helianthus giganteus</i>	giant sunflower	2.5	4	N
<i>Hieracium caespitosum</i>	meadow hawkweed	2.5	0	I
<i>Hypericum perforatum</i>	common St. John's-wort	2.5	0	I
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lactuca biennis</i>	biennial blue lettuce	2.5	3	N
<i>Leersia oryzoides</i>	rice cut grass	2.5	3	N
<i>Lotus corniculatus</i>	bird's-foot trefoil	2.5	0	I
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Phleum pratense subsp. pratense</i>	timothy	2.5	0	I
<i>Plantago lanceolata</i>	English plantain	2.5	0	I
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Poa pratensis subsp. pratensis</i>	Kentucky bluegrass	2.5	0	I
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Prunus serotina</i>	wild black cherry	2.5	3	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N

<i>Ranunculus acris</i>	tall buttercup	2.5	0	I
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rumex britannica</i>	great water dock	2.5	8	N
<i>Salix bebbiana</i>	Bebb's willow	2.5	7	N
<i>Salix petiolaris</i>	slender willow	2.5	6	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Maianthemum racemosum</i>	false Solomon's-seal	2.5	5	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Thuja occidentalis</i>	white cedar	2.5	9	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trifolium repens</i>	white clover	2.5	0	I
<i>Abies balsamea</i>	balsam fir	1	5	N
<i>Populus balsamifera</i>	balsam poplar	1	4	N

Sample Name	Crew	Date	Latitude	Longitude
wirc1016f	EJO/MJF	2022-08-27	46.437251	-90.500259
Wetland Name		Community Type		
wirc1016		Coniferous Swamp		
Total % Cover		Total % Non-Native Cover		
299.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
41.988	3.625	5.561	0.480
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
41.624	40.990	5.466	5.382

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer rubrum</i>	red maple	62.5	3	N
<i>Betula alleghaniensis</i>	yellow birch	37.5	7	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Carex intumescens</i>	bladder sedge	15	5	N
<i>Fraxinus nigra</i>	black ash	15	8	N
<i>Osmunda cinnamomea</i>	cinnamon fern	15	7	N
<i>Tsuga canadensis</i>	eastern hemlock	15	8	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex brunneascens</i>	green bog sedge	2.5	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex gynandra</i>	nodding sedge	2.5	6	N
<i>Carex trisperma</i>	three-seeded bog sedge	2.5	9	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N

<i>Clintonia borealis</i>	bluebead lily	2.5	7	N
<i>Coptis trifolia</i>	three-leaved gold-thread	2.5	8	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lycopodium annotinum</i>	bristly clubmoss	2.5	7	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thuja occidentalis</i>	white cedar	2.5	9	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis</i> subsp. <i>borealis</i>	American starflower	2.5	7	N
<i>Trillium cernuum</i>	nodding trillium	2.5	8	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Chelone glabra</i>	white turtlehead	1	7	N
<i>Monotropa uniflora</i>	Ghost pipe	1	5	N

Sample Name	Crew	Date	Latitude	Longitude
wirc006f/wirc006f_x	SAM/IGL	2022-09-02	46.439429	-90.497801
Wetland Name		Community Type		
wirc006_x		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
196.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
28.855	1.502	4.452	0.232
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
28.855	27.094	4.452	4.181

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Impatiens capensis</i>	spotted touch-me-not	37.5	2	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Carex projecta</i>	projecting sedge	15	4	N
<i>Fraxinus nigra</i>	black ash	15	8	N
<i>Glyceria striata</i>	fowl manna grass	15	4	N
<i>Scirpus cyperinus</i>	wool-grass	15	4	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Calystegia sepium</i>	hedge bindweed	2.5	2	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex cristatella</i>	crested sedge	2.5	4	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum arvense</i>	field horsetail	2.5	1	N
<i>Erechtites hieracifolia</i> var. <i>hieracifolia</i>	American burn-weed	2.5	2	N

<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Geum canadense</i>	white avens	2.5	2	N
<i>Glyceria canadensis</i> var. <i>canadensis</i>	rattlesnake grass	2.5	7	N
<i>Juncus effusus</i>	common rush	2.5	4	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scirpus atrocinctus</i>	black-girdled wool-grass	2.5	7	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Acer rubrum</i>	red maple	1	3	N
<i>Carex brunnescens</i>	green bog sedge	1	7	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	1	1	N
<i>Tsuga canadensis</i>	eastern hemlock	1	8	N

Sample Name	Crew	Date	Latitude	Longitude
wira008s	EJO/MJF	2022-08-27	46.442929	-90.490879
Wetland Name		Community Type		
wira008		Alder Thicket		
Total % Cover		Total % Non-Native Cover		
238.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
32.810	1.991	4.640	0.282
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
32.173	33.546	4.462	4.652

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	62.5	4	N
<i>Carex bromoides</i>	brome-like sedge	15	8	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	15	5	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer rubrum</i>	red maple	2.5	3	N
<i>Acer spicatum</i>	mountain maple	2.5	6	N
<i>Agrostis</i> cf. <i>perennans</i>	autumn bent grass	2.5	4	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Carex tenera</i>	marsh straw sedge	2.5	4	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Eupatorium perfoliatum</i>	boneset	2.5	6	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N

<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lactuca biennis</i>	biennial blue lettuce	2.5	3	N
<i>Leersia oryzoides</i>	rice cut grass	2.5	3	N
<i>Ludwigia palustris</i>	common water primrose	2.5	4	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Mimulus ringens</i>	Monkey-flower	2.5	6	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Persicaria hydropiper</i>	marsh waterpepper	2.5	0	I
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N
<i>Ranunculus pensylvanicus</i>	bristly buttercup	2.5	5	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Sagittaria latifolia</i> var. <i>latifolia</i>	broad-leaved arrowhead	2.5	3	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Tsuga canadensis</i>	eastern hemlock	2.5	8	N
<i>Urtica dioica</i> subsp. <i>gracilis</i>	stinging nettle	2.5	0	I
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Viburnum lentago</i>	nannyberry	2.5	4	N
<i>Chelone glabra</i>	white turtlehead	1	7	N

Sample Name	Crew	Date	Latitude	Longitude
wira008e_x	SAM/IGL	2022-09-02	46.442724	-90.490772
Wetland Name		Community Type		
wira008_x		Fresh Meadow (Native Subtype)		
Total % Cover		Total % Non-Native Cover		
118		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
29.168	0.864	5.156	0.153
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
28.297	26.758	4.853	4.589

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Impatiens capensis</i>	spotted touch-me-not	15	2	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	15	5	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Bidens cernua</i>	nodding bur-marigold	2.5	4	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex scabrata</i>	eastern rough sedge	2.5	8	N
<i>Cicuta bulbifera</i>	bulb-bearing water hemlock	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Eutrochium maculatum</i>	spotted Joe-Pye-weed	2.5	4	N
<i>Eupatorium perfoliatum</i>	boneset	2.5	6	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium obtusum</i>	blunt-leaf bedstraw	2.5	6	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Hydrocotyle americana</i>	American water-pennywort	2.5	7	N
<i>Mentha arvensis</i> var. <i>canadensis</i>	common mint	2.5	3	N
<i>Persicaria punctata</i>	dotted smartweed	2.5	5	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Ranunculus hispidus</i>	hispid buttercup	2.5	6	N

<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Micranthes pensylvanica</i>	eastern swamp saxifrage	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Urtica dioica subsp. gracilis</i>	stinging nettle	2.5	0	I
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Chelone glabra</i>	white turtlehead	1	7	N
<i>Mimulus ringens</i>	Monkey-flower	1	6	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	1	1	N

Sample Name	Crew	Date	Latitude	Longitude
wira008f_x	SAM/IGL	2022-09-02	46.442876	-90.490566
Wetland Name		Community Type		
wira008_x		Coniferous Swamp		
Total % Cover		Total % Non-Native Cover		
128.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
35.002	1.350	6.188	0.239
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
35.002	37.221	6.188	6.580

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Thuja occidentalis</i>	white cedar	15	9	N
<i>Tsuga canadensis</i>	eastern hemlock	15	8	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer spicatum</i>	mountain maple	2.5	6	N
<i>Actaea rubra</i>	red baneberry	2.5	7	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Circaea alpina subsp. alpina</i>	alpine enchanter's-nightshade	2.5	7	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N

<i>Oxalis montana</i>	mountain wood-sorrel	2.5	9	N
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Taxus canadensis</i>	Canada yew	2.5	10	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Carex bromoides</i>	brome-like sedge	1	8	N

Sample Name	Crew	Date	Latitude	Longitude
wira008f	EJO/MJF	2022-08-27	46.445354	-90.488133
Wetland Name		Community Type		
wira008		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
299.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
36.425	2.866	4.825	0.380
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
36.109	38.041	4.741	4.995

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Carex intumescens</i>	bladder sedge	62.5	5	N
<i>Acer rubrum</i>	red maple	37.5	3	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Corylus cornuta</i>	beaked hazelnut	15	5	N
<i>Dryopteris intermedia</i>	glandular wood fern	15	7	N
<i>Fraxinus nigra</i>	black ash	15	8	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Acer saccharum</i>	sugar maple	2.5	5	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex rosea</i>	starry sedge	2.5	4	N
<i>Carex scoparia</i> var. <i>scoparia</i>	lance-fruited oval sedge	2.5	4	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Dryopteris cristata</i>	crested fern	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N

<i>Eupatorium perfoliatum</i>	boneset	2.5	6	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Fraxinus pennsylvanica</i>	green ash	2.5	2	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Iris versicolor</i>	northern blue flag	2.5	5	N
<i>Lactuca biennis</i>	biennial blue lettuce	2.5	3	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Oxalis montana</i>	mountain wood-sorrel	2.5	9	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Fallopia cilinodis</i>	black-fringe bindweed	2.5	1	N
<i>Prunus serotina</i>	wild black cherry	2.5	3	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Ribes cynosbati</i>	prickly gooseberry	2.5	3	N
<i>Ribes glandulosum</i>	skunk currant	2.5	7	N
<i>Rubus idaeus</i> var. <i>strigosus</i>	red raspberry	2.5	3	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scirpus cyperinus</i>	wool-grass	2.5	4	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Trientalis borealis</i> subsp. <i>borealis</i>	American starflower	2.5	7	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Urtica dioica</i> subsp. <i>gracilis</i>	stinging nettle	2.5	0	I
<i>Uvularia sessilifolia</i>	pale bellwort	2.5	6	N
<i>Apocynum androsaemifolium</i>	spreading dogbane	1	2	N
<i>Spiraea alba</i> var. <i>alba</i>	white meadowsweet	1	4	N

Sample Name	Crew	Date	Latitude	Longitude
wirc1002f	EJO/MJF	2022-08-26	46.462108	-90.481008
Wetland Name		Community Type		
wirc1002		Coniferous Swamp		
Total % Cover		Total % Non-Native Cover		
370.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
46.000	5.078	5.111	0.564
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
45.719	47.220	5.049	5.215

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	37.5	8	N
<i>Ulmus americana</i>	American elm	37.5	3	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Calamagrostis canadensis</i>	bluejoint	15	5	N
<i>Carex bromoides</i>	brome-like sedge	15	8	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Solidago gigantea</i>	giant goldenrod	15	3	N
<i>Thuja occidentalis</i>	white cedar	15	9	N
<i>Tsuga canadensis</i>	eastern hemlock	15	8	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Caltha palustris</i>	common marsh marigold	2.5	6	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex gynandra</i>	nodding sedge	2.5	6	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N

<i>Carex leptalea</i> subsp. <i>leptalea</i>	slender sedge	2.5	9	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Chelone glabra</i>	white turtlehead	2.5	7	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's- nightshade	2.5	2	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Coptis trifolia</i>	three-leaved gold-thread	2.5	8	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Epilobium ciliatum</i>	American willow-herb	2.5	3	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium triflorum</i>	fragrant bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lactuca biennis</i>	biennial blue lettuce	2.5	3	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Lysimachia ciliata</i>	fringed loosestrife	2.5	5	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Mitella nuda</i>	naked miterwort	2.5	9	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Ostrya virginiana</i>	ironwood	2.5	5	N
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Packera aurea</i>	golden ragwort	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Fallopia cilinodis</i>	black-fringe bindweed	2.5	1	N

<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Ranunculus abortivus</i>	little-leaf buttercup	2.5	1	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes americanum</i>	wild black currant	2.5	4	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Micranthes pensylvanica</i>	eastern swamp saxifrage	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Uvularia sessilifolia</i>	pale bellwort	2.5	6	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Viburnum lentago</i>	nannyberry	2.5	4	N
<i>Vitis riparia</i>	wild grape	2.5	2	N
<i>Prunus serotina</i>	wild black cherry	1	3	N
<i>Sanguinaria canadensis</i>	bloodroot	1	6	N
<i>Trillium cernuum</i>	nodding trillium	1	8	N

Sample Name	Crew	Date	Latitude	Longitude
wird003f	EJO/MJF	2022-08-26	46.463167	-90.481624
Wetland Name		Community Type		
wird003		Coniferous Swamp		
Total % Cover		Total % Non-Native Cover		
403.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
49.996	5.287	5.330	0.564
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
49.437	52.219	5.211	5.504

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Fraxinus nigra</i>	black ash	37.5	8	N
<i>Tsuga canadensis</i>	eastern hemlock	37.5	8	N
<i>Abies balsamea</i>	balsam fir	15	5	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Betula papyrifera</i>	canoe birch	15	3	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Glyceria striata</i>	fowl manna grass	15	4	N
<i>Thuja occidentalis</i>	white cedar	15	9	N
<i>Ulmus americana</i>	American elm	15	3	N
<i>Agrimonia striata</i>	roadside agrimony	2.5	3	N
<i>Agrostis cf. perennans</i>	autumn bent grass	2.5	4	N
<i>Alnus incana subsp. rugosa</i>	speckled alder	2.5	4	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Symphyotrichum puniceum</i>	bristly aster	2.5	5	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina var. angustum</i>	lady fern	2.5	5	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N

<i>Carex bromoides</i>	brome-like sedge	2.5	8	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex crinita</i>		2.5	0	
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex rosea</i>	starry sedge	2.5	4	N
<i>Carex stipata</i>	common fox sedge	2.5	2	N
<i>Caulophyllum thalictroides</i>	blue cohosh	2.5	8	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Clintonia borealis</i>	bluebead lily	2.5	7	N
<i>Coptis trifolia</i>	three-leaved gold-thread	2.5	8	N
<i>Cornus alternifolia</i>	pagoda dogwood	2.5	7	N
<i>Cornus canadensis</i>	bunchberry	2.5	7	N
<i>Cornus stolonifera</i>	red osier dogwood	2.5	3	N
<i>Corylus cornuta</i>	beaked hazelnut	2.5	5	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Elymus hystrix</i>	bottlebrush grass	2.5	6	N
<i>Elymus virginicus</i> var. <i>virginicus</i>	common eastern wild-rye	2.5	6	N
<i>Equisetum pratense</i>	meadow horsetail	2.5	9	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fragaria virginiana</i>	common strawberry	2.5	1	N
<i>Galium asprellum</i>	rough bedstraw	2.5	7	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Ilex verticillata</i>	common winterberry	2.5	7	N
<i>Impatiens capensis</i>	spotted touch-me-not	2.5	2	N
<i>Lactuca biennis</i>	biennial blue lettuce	2.5	3	N
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Mitella nuda</i>	naked miterwort	2.5	9	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda cinnamomea</i>	cinnamon fern	2.5	7	N

<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Prenanthes alba</i>	white rattlesnakeroot	2.5	5	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Prunus serotina</i>	wild black cherry	2.5	3	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Pteridium aquilinum</i>	bracken	2.5	2	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Quercus rubra</i>	northern red oak	2.5	5	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes americanum</i>	wild black currant	2.5	4	N
<i>Ribes glandulosum</i>	skunk currant	2.5	7	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Micranthes pensylvanica</i>	eastern swamp saxifrage	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis</i> subsp. <i>borealis</i>	American starflower	2.5	7	N
<i>Trillium cernuum</i>	nodding trillium	2.5	8	N
<i>Uvularia sessilifolia</i>	pale bellwort	2.5	6	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Oryzopsis asperifolia</i>	mountain ricegrass	1	6	N
<i>Osmunda claytoniana</i>	interrupted fern	0	6	N

Sample Name	Crew	Date	Latitude	Longitude
wird003e	EJO/MJF	2022-08-26	46.465031	-90.481455
Wetland Name		Community Type		
wird003		Hardwood Swamp (Vernal Pool Subtype)		
Total % Cover		Total % Non-Native Cover		
199		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
32.498	1.692	4.844	0.252
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
31.799	34.244	4.638	4.995

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer rubrum</i>	red maple	15	3	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	15	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	15	6	N
<i>Fraxinus nigra</i>	black ash	15	8	N
<i>Matteuccia struthiopteris</i>	American ostrich fern	15	5	N
<i>Onoclea sensibilis</i>	sensitive fern	15	5	N
<i>Allium tricoccum</i>	wild leek	2.5	6	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Betula papyrifera</i>	canoe birch	2.5	3	N
<i>Bidens frondosa</i>	common beggar-ticks	2.5	1	N
<i>Carex brunnescens</i>	green bog sedge	2.5	7	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex projecta</i>	projecting sedge	2.5	4	N
<i>Carex tuckermanii</i>	Tuckerman's sedge	2.5	8	N
<i>Caulophyllum thalictroides</i>	blue cohosh	2.5	8	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Cornus alternifolia</i>	pagoda dogwood	2.5	7	N
<i>Galium tinctorium</i>	southern three-lobed bedstraw	2.5	5	N
<i>Glyceria grandis</i> var. <i>grandis</i>	American manna grass	2.5	6	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N

<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Penthorum sedoides</i>	ditch stonecrop	2.5	3	N
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Fallopia cilioidis</i>	black-fringe bindweed	2.5	1	N
<i>Persicaria sagittata</i>	arrow-leaved tear-thumb	2.5	6	N
<i>Populus tremuloides</i>	quaking aspen	2.5	2	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	2.5	4	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Trillium cernuum</i>	nodding trillium	2.5	8	N
<i>Ulmus americana</i>	American elm	2.5	3	N
<i>Vitis riparia</i>	wild grape	2.5	2	N
<i>Carex radiata</i>	eastern star sedge	1	4	N
<i>Rumex obtusifolius</i>	bitter dock	1	0	I
<i>Maianthemum racemosum</i>	false Solomon's-seal	1	5	N
<i>Taraxacum officinale</i>	common dandelion	1	0	I

Sample Name	Crew	Date	Latitude	Longitude
wird001f	EJO/MJF	2022-08-26	46.466819	-90.481827
Wetland Name		Community Type		
wird001		Floodplain Forest		
Total % Cover		Total % Non-Native Cover		
439.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
41.555	4.613	4.705	0.522
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
41.032	41.893	4.588	4.684

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Matteuccia struthiopteris</i>	American ostrich fern	62.5	5	N
<i>Acer saccharum</i>	sugar maple	37.5	5	N
<i>Fraxinus pennsylvanica</i>	green ash	37.5	2	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Acer saccharinum</i>	silver maple	15	2	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Caulophyllum thalictroides</i>	blue cohosh	15	8	N
<i>Fraxinus nigra</i>	black ash	15	8	N
<i>Prunus serotina</i>	wild black cherry	15	3	N
<i>Thalictrum dasycarpum</i>	tall meadow-rue	15	4	N
<i>Thuja occidentalis</i>	white cedar	15	9	N
<i>Tilia americana</i>	American basswood	15	5	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Adiantum pedatum</i>	maidenhair fern	2.5	7	N
<i>Allium tricoccum</i>	wild leek	2.5	6	N
<i>Alnus incana</i> subsp. <i>rugosa</i>	speckled alder	2.5	4	N
<i>Apocynum androsaemifolium</i>	spreading dogbane	2.5	2	N
<i>Aquilegia canadensis</i>	columbine	2.5	5	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Bromus ciliatus</i>	fringed brome	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex bromoides</i>	brome-like sedge	2.5	8	N

<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex hystericina</i>	porcupine sedge	2.5	3	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Carex radiata</i>	eastern star sedge	2.5	4	N
<i>Carex retrorsa</i>	retrorse sedge	2.5	6	N
<i>Circaea lutetiana</i>	broad-leaf enchanter's- nightshade	2.5	2	N
<i>Clematis virginiana</i>	virgin's bower	2.5	4	N
<i>Cornus alternifolia</i>	pagoda dogwood	2.5	7	N
<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Echinocystis lobata</i>	wild cucumber	2.5	2	N
<i>Elymus virginicus</i> var. <i>virginicus</i>	common eastern wild-rye	2.5	6	N
<i>Epilobium ciliatum</i>	American willow-herb	2.5	3	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Equisetum hyemale</i> subsp. <i>affine</i>	common scouring rush	2.5	3	N
<i>Eupatorium perfoliatum</i>	boneset	2.5	6	N
<i>Geum aleppicum</i>	yellow avens	2.5	3	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Heracleum lanatum</i>	cow parsnip	2.5	3	N
<i>Laportea canadensis</i>	woodnettle	2.5	4	N
<i>Lycopus americanus</i>	cut-leaved bugleweed	2.5	4	N
<i>Lysimachia ciliata</i>	fringed loosestrife	2.5	5	N
<i>Melilotus alba</i>	white sweet clover	2.5	0	I
<i>Mimulus ringens</i>	Monkey-flower	2.5	6	N
<i>Muhlenbergia mexicana</i>	Mexican muhly grass	2.5	4	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Oxalis stricta</i>	yellow wood-sorrel	2.5	0	N
<i>Parthenocissus vitacea</i>	woodbine	2.5	4	N
<i>Phalaris arundinacea</i>	reed canary grass	2.5	0	I
<i>Poa palustris</i>	fowl bluegrass	2.5	5	N
<i>Fallopia ciliatodis</i>	black-fringe bindweed	2.5	1	N
<i>Persicaria lapathifolia</i>	curly-top knotweed	2.5	2	N
<i>Persicaria pennsylvanica</i>	Pennsylvania knotweed	2.5	1	N
<i>Prunella vulgaris</i>	heal-all	2.5	1	N
<i>Prunus virginiana</i> var. <i>virginiana</i>	chokecherry	2.5	3	N
<i>Quercus rubra</i>	northern red oak	2.5	5	N
<i>Ranunculus recurvatus</i>	blisterwort	2.5	5	N
<i>Ribes cynosbati</i>	prickly gooseberry	2.5	3	N
<i>Ribes triste</i>	swamp red currant	2.5	8	N

<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Rumex britannica</i>	great water dock	2.5	8	N
<i>Salix petiolaris</i>	slender willow	2.5	6	N
<i>Sanguinaria canadensis</i>	bloodroot	2.5	6	N
<i>Micranthes pensylvanica</i>	eastern swamp saxifrage	2.5	7	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Maianthemum racemosum</i>	false Solomon's-seal	2.5	5	N
<i>Maianthemum stellatum</i>	starry false Solomon's-seal	2.5	5	N
<i>Solidago flexicaulis</i>	zigzag goldenrod	2.5	6	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Stachys palustris</i>	woundwort	2.5	5	N
<i>Trillium cernuum</i>	nodding trillium	2.5	8	N
<i>Uvularia sessilifolia</i>	pale bellwort	2.5	6	N
<i>Verbena hastata</i>	blue vervain	2.5	3	N
<i>Viburnum lentago</i>	nannyberry	2.5	4	N
<i>Lysimachia terrestris</i>	yellow loosestrife	1	7	N
<i>Scirpus cyperinus</i>	wool-grass	1	4	N

Sample Name	Crew	Date	Latitude	Longitude
wira016f	EJO/MJF	2022-08-26	46.469466	-90.482007
Wetland Name		Community Type		
wira016		Coniferous Swamp		
Total % Cover		Total % Non-Native Cover		
232		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
39.404	2.628	5.688	0.379
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
38.608	39.592	5.460	5.599

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Tsuga canadensis</i>	eastern hemlock	37.5	8	N
<i>Acer rubrum</i>	red maple	15	3	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Betula alleghaniensis</i>	yellow birch	15	7	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Osmunda claytoniana</i>	interrupted fern	15	6	N
<i>Quercus rubra</i>	northern red oak	15	5	N
<i>Abies balsamea</i>	balsam fir	2.5	5	N
<i>Allium tricoccum</i>	wild leek	2.5	6	N
<i>Anemone quinquefolia</i>	wood anemone	2.5	6	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Eurybia macrophylla</i>	big-leaved aster	2.5	4	N
<i>Doellingeria umbellata</i>	flat-top aster	2.5	6	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	2.5	5	N
<i>Betula papyrifera</i>	canoe birch	2.5	3	N
<i>Brachyelytrum aristosum</i>	bearded shorthusk	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex brunneascens</i>	green bog sedge	2.5	7	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Cinna latifolia</i>	drooping woodreed	2.5	7	N
<i>Clintonia borealis</i>	bluebead lily	2.5	7	N
<i>Cornus alternifolia</i>	pagoda dogwood	2.5	7	N

<i>Dryopteris intermedia</i>	glandular wood fern	2.5	7	N
<i>Equisetum sylvaticum</i>	woodland horsetail	2.5	7	N
<i>Fraxinus nigra</i>	black ash	2.5	8	N
<i>Glyceria striata</i>	fowl manna grass	2.5	4	N
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Hieracium caespitosum</i>	meadow hawkweed	2.5	0	I
<i>Lonicera canadensis</i>	fly honeysuckle	2.5	8	N
<i>Lycopus uniflorus</i>	northern bugleweed	2.5	4	N
<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Mitchella repens</i>	partridgeberry	2.5	6	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Ostrya virginiana</i>	ironwood	2.5	5	N
<i>Phegopteris connectilis</i>	Narrow beech fern	2.5	7	N
<i>Picea glauca</i>	white spruce	2.5	7	N
<i>Pyrola elliptica</i>	elliptic shinleaf	2.5	6	N
<i>Rubus pubescens</i>	dwarf raspberry	2.5	7	N
<i>Scutellaria lateriflora</i>	mad dog skullcap	2.5	5	N
<i>Maianthemum racemosum</i>	false Solomon's-seal	2.5	5	N
<i>Thuja occidentalis</i>	white cedar	2.5	9	N
<i>Tilia americana</i>	American basswood	2.5	5	N
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Trillium cernuum</i>	nodding trillium	2.5	8	N
<i>Veronica officinalis</i>	common speedwell	2.5	0	I
<i>Vitis riparia</i>	wild grape	2.5	2	N
<i>Aralia nudicaulis</i>	wild sarsaparilla	1	6	N
<i>Prunus serotina</i>	wild black cherry	1	3	N

Sample Name	Crew	Date	Latitude	Longitude
wird006f	SAM/IGL	2022-08-30	46.472169	-90.482398
Wetland Name		Community Type		
wird006		Hardwood Swamp		
Total % Cover		Total % Non-Native Cover		
189.5		0		

Floristic Quality Metrics: Native Species (n)			
FQIn	wFQIn	Mean C ($\bar{C}_n$)	Weighted Mean C ($w\bar{C}_n$)
28.375	1.289	4.939	0.224
Floristic Quality Metrics: All Species (a)			
FQIa	wFQIa	Mean C ($\bar{C}_a$)	Weighted Mean C ($w\bar{C}_a$)
26.797	25.535	4.405	4.198

Scientific Name	Common Name	% Cover (Midpoint)	C-Value	WI Status
<i>Acer rubrum</i>	red maple	15	3	N
<i>Acer saccharum</i>	sugar maple	15	5	N
<i>Athyrium filix-femina</i> var. <i>angustum</i>	lady fern	15	5	N
<i>Erechtites hieracifolia</i> var. <i>hieracifolia</i>	American burn-weed	15	2	N
<i>Fraxinus pennsylvanica</i>	green ash	15	2	N
<i>Juncus effusus</i>	common rush	15	4	N
<i>Phegopteris connectilis</i>	Narrow beech fern	15	7	N
<i>Scirpus cyperinus</i>	wool-grass	15	4	N
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	2.5	5	N
<i>Symphotrichum lateriflorum</i>	side-flowering aster	2.5	3	N
<i>Betula alleghaniensis</i>	yellow birch	2.5	7	N
<i>Calamagrostis canadensis</i>	bluejoint	2.5	5	N
<i>Carex crinita</i> var. <i>crinita</i>	fringed sedge	2.5	6	N
<i>Carex gracillima</i>	graceful sedge	2.5	5	N
<i>Carex intumescens</i>	bladder sedge	2.5	5	N
<i>Carex pedunculata</i>	long-stalked sedge	2.5	7	N
<i>Dryopteris carthusiana</i>	spinulose shield fern	2.5	7	N
<i>Epilobium coloratum</i>	purple-leaved willow herb	2.5	3	N
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	2.5	4	N
<i>Galeopsis tetrahit</i>	hemp nettle	2.5	0	I
<i>Gymnocarpium dryopteris</i>	common oak fern	2.5	7	N
<i>Hieracium aurantiacum</i>	orange hawkweed	2.5	0	I
<i>Lobelia inflata</i>	Indian tobacco	2.5	2	N

<i>Maianthemum canadense</i>	Canada mayflower	2.5	5	N
<i>Onoclea sensibilis</i>	sensitive fern	2.5	5	N
<i>Osmunda claytoniana</i>	interrupted fern	2.5	6	N
<i>Ostrya virginiana</i>	ironwood	2.5	5	N
<i>Quercus rubra</i>	northern red oak	2.5	5	N
<i>Rubus idaeus var. strigosus</i>	red raspberry	2.5	3	N
<i>Scirpus atrocinctus</i>	black-girdled wool-grass	2.5	7	N
<i>Scirpus hattorianus</i>	mosquito bulrush	2.5	3	N
<i>Solidago gigantea</i>	giant goldenrod	2.5	3	N
<i>Taraxacum officinale</i>	common dandelion	2.5	0	I
<i>Trientalis borealis subsp. borealis</i>	American starflower	2.5	7	N
<i>Tsuga canadensis</i>	eastern hemlock	2.5	8	N
<i>Cirsium vulgare</i>	bull thistle	1	0	I
<i>Lonicera canadensis</i>	fly honeysuckle	1	8	N

Appendix E – Wetland Photos





wasb027f facing south - milepost 2.9



wasm002f facing southwest - milepost 3.1



wasm002e facing southwest - milepost 3.3



wasm001f facing northeast - milepost 3.8



was1054f facing northwest - milepost 4.1



was1054f facing west - milepost 4.1



wasc059e facing southeast - milepost 5.9



wasc061e facing southeast - milepost 5.9



wasc062f facing northeast - milepost 6



wase1016f facing northeast - milepost 10.6



was1006f facing northeast - milepost 14.2



was1033e facing east - milepost 14.7



wasc1033s facing southwest - milepost 14.7



wasc1014f facing south - milepost 15.9



wasc1014f facing west - milepost 15.9



wasc1041f facing north - milepost 16.6



wasc1045e facing southwest - milepost 16.8



wasc1045f facing southwest - milepost 16.8



wasb1004f facing west - milepost 17.2



wase001e facing southeast - milepost 18.5



wasd1024e facing north - milepost 18.9



wasd1024f1 facing north - milepost 18.9



wasd1024f2 facing northeast - milepost 18.9



wasd1024s facing southwest - milepost 19



wasd1028f facing northeast - milepost 19.2



wasd1028f facing southwest - milepost 19.2



was139f_x facing north - milepost 20.2



was139f_x facing west - milepost 20.2



wasv013f facing north - milepost 20.8



wasv019e facing north - milepost 21.2



wasv019f facing east - milepost 21.3



wasv059f1 facing northeast - milepost 22.3



wasc069s facing southwest - milepost 22.6



wasc071f facing west - milepost 22.7



wasc072f facing southwest - milepost 22.9



wasc074e facing south - milepost 22.9



wasb011f facing west - milepost 23.4



was038f facing west - milepost 23.7



wasd1008f facing west - milepost 24.2



wasd1010f facing east - milepost 25.5



wasd1009f facing south - milepost 25.7



wasv042f facing northeast - milepost 26.3



wasv039f facing northwest - milepost 26.3



wasv053f facing east - milepost 27.5



wasv053f facing northwest - milepost 27.5



wasw023ss facing northeast - milepost 28.7



wasw023ss facing west - milepost 28.7



wasw024f facing west - milepost 28.8



wasw021f facing southwest - milepost 29.4



wasw026f facing north - milepost 29.5



wasw026f facing west - milepost 29.5



wasw026f facing northwest - milepost 29.6



wasw013ss facing northwest - milepost 29.8



wasw012f facing east - milepost 30



wirb1002f facing northwest - milepost 30.7



wirb1002f facing south - milepost 30.7



wirb1005f facing northeast - milepost 30.8



wirb1006f facing north - milepost 30.9



wirb1006f facing southeast - milepost 30.9



wirb1007f facing northwest - milepost 31.3



wirb1007f facing southeast - milepost 31.3



wirb009f facing east - milepost 31.4



wirb009f facing northwest - milepost 31.4



wirb015e facing east - milepost 31.8



wirb015e facing northwest - milepost 31.8



wird026f facing east - milepost 32.7



wird027f facing southeast - milepost 32.8



wire1001f facing south - milepost 33



wire1001e facing north - milepost 33



wird028f facing northeast - milepost 33.2



wird028f facing west - milepost 33.2



wirb046f facing north - milepost 33.4



wirb044f facing southwest - milepost 33.4



wirb042f facing west - milepost 33.6



wirb039s facing west - milepost 33.7



wirb037s facing east - milepost 34



wirb037s facing south - milepost 34



wirc023f facing east - milepost 34.1



wirc023f facing southeast - milepost 34.1



wirc021f facing south - milepost 34.2



wirc022f facing southeast - milepost 34.1



wirc024f facing west - milepost 34.2



wirc025f facing southwest - milepost 34.3



wirc013f facing north - milepost 34.5



wirc013f facing west - milepost 34.5



wirc1022f facing southwest - milepost 34.8



wirc1019f facing southwest - milepost 34.9



wirc014f facing north - milepost 35.1



wirc014e facing east - milepost 35.1



wirc1016f facing southeast - milepost 35.3



wirc006f facing southwest - milepost 35.5



wirc006f facing northeast - milepost 35.5



wira008s facing southwest - milepost 35.9



wira008e facing north - milepost 35.9



wira008f facing west - milepost 35.9



wira008f facing northwest - milepost 36.1



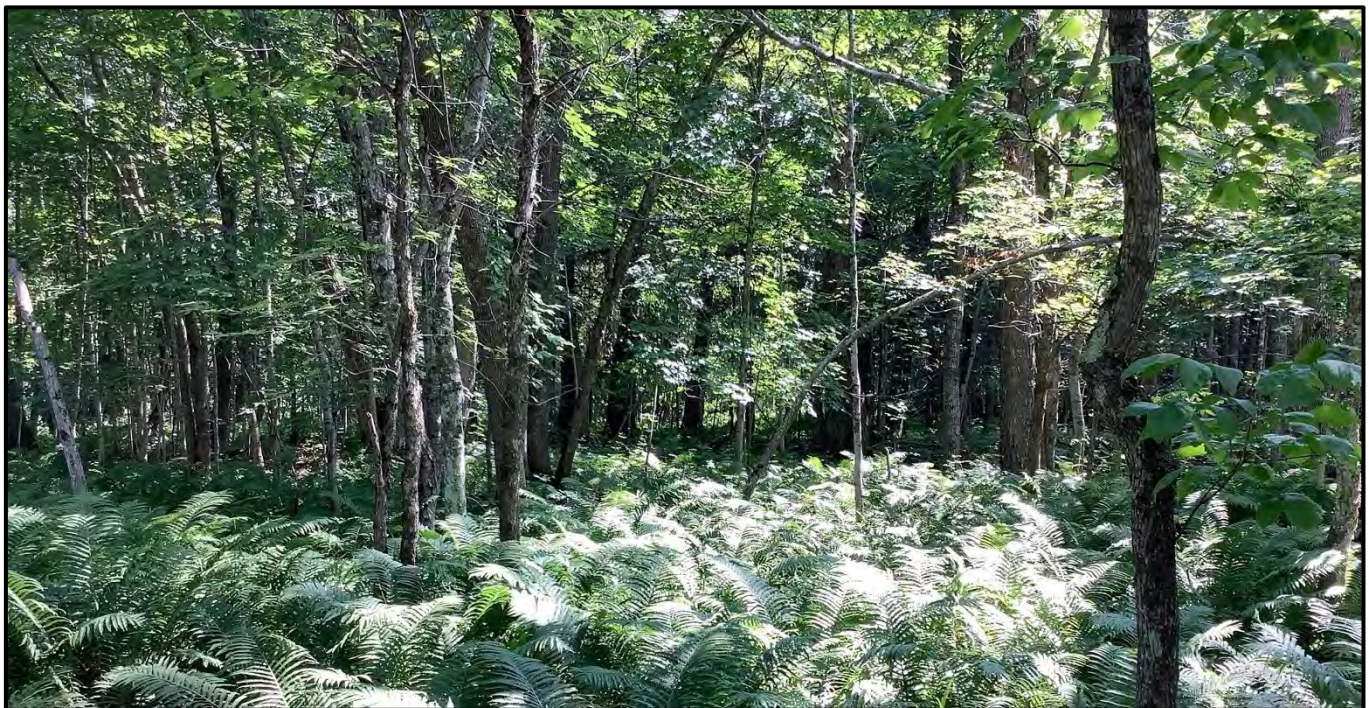
wirc1002f facing north - milepost 37.4



wird003f facing southwest - milepost 37.6



wird003e facing south - milepost 37.6



wird001f facing southeast - milepost 37.8



wira016f facing north - milepost 37.9



wird006f facing south - milepost 38.1



wird006f facing west - milepost 38.1

Appendix F – Wetland Descriptions



Wetland Feature	County	Community Description	Nearest Milepost
wasb027f	Ashland	Wet-mesic forest of <i>Populus tremuloides</i> with <i>Alnus incana</i> , <i>Calamagrostis canadensis</i> , and <i>Carex lacustris</i> .	2.9
wasm002e/f	Ashland	Mosaic wetland community wet-mesic forest with <i>Acer rubrum</i> and <i>Populus tremuloides</i> and various small openings/canopy gaps. Non-forested portions graminoid-dominated community, primarily <i>Carex lacustris</i> and <i>Scirpus cyperinus</i> , along with <i>Phalaris arundinacea</i> in the largest open portion.	3.1
wasm001f	Ashland	Canopy of <i>Populus tremuloides</i> with <i>Acer rubrum</i> and <i>Alnus incana</i> . Small depressional pocket that is likely inundated briefly in the spring.	3.8
was1054f	Ashland	Originally classified as a floodplain forest. Abrupt wetland boundary on the sound end, starting as the base of a slope, dominated by <i>Fraxinus nigra</i> with strong discharge hydrology. This area is more like a wet forest, but floodplain forest just north of there and for most of the feature. Ground layer includes dominant species <i>Matteuccia struthiopteris</i> and <i>Carex bromoides</i> . Seepage/discharge subsides north of southernmost waterbody feature. Varying topography throughout. Mix of black and <i>Fraxinus pennsylvanica</i> in the overall canopy. Buckthorn is present but rare on sound end of feature more common in the central portion of the feature. Nipplewort quite common on south end.	4.1
wasc059e	Ashland	Small depression with a canopy of <i>Acer rubrum</i> on fringe. Ground layer is rare to patchy, mostly devoid of vegetation where inundated during the first part of the growing season. <i>Fraxinus pennsylvanica</i> and <i>Ulmus americana</i> are just sapling size, with no mature individuals nearby. <i>Carex intumescens</i> and <i>Symphyotrichum lateriflorum</i> are very common.	5.9
wasc061e	Ashland	Small depressional basin surrounded by mesic hardwoods. Likely saturated for a brief period of time in the spring. <i>Fraxinus pennsylvanica</i> saplings are prevalent but no mature individuals. Dominant species include <i>Carex gracillima</i> , <i>Symphyotrichum lateriflorum</i> , and <i>Fraxinus pennsylvanica</i> .	5.9
wasc062f	Ashland	Wet forest of <i>Fraxinus nigra</i> , typically along the perimeter of the feature. Depressional feature with varying graminoid cover. Common species in the ground layer include <i>Carex crinita</i> , <i>Carex intumescens</i> , and <i>Symphyotrichum lateriflorum</i> . Extremely dry.	6.0
wase1016f	Ashland	Wetland is a hardwood swamp; the canopy is interrupted with <i>Fraxinus nigra</i> , <i>Acer rubrum</i> , and white pine among the dominant species. Community is variable with <i>Fraxinus nigra</i> dominated forest more in the eastern half of wetland and mixed canopy forest more in the western half.	10.6
was1006f	Ashland	Wetland is a hardwood swamp with mixed canopy of <i>Fraxinus nigra</i> , <i>Thuja occidentalis</i> , <i>Acer saccharum</i> , <i>Acer rubrum</i> , <i>Fraxinus pennsylvanica</i> , and <i>Ulmus americana</i> . Ground layer with abundant sedges and ferns; appears to be wormed with many areas of bare soil.	14.2
wasc1033e/s	Ashland	Disturbed floodplain wetland dominated by shrub cover. Not representative of a native plane community. Dominated by a mix of cover of <i>Salix interior</i> and shrub-sized <i>Populus balsamifera</i> . Interrupted ground cover of <i>Equisetum hyemale</i> . Open portion with Severe erosion and dominated by disturbance-tolerant species. Many ruderal species present. Extends into the overall flood zone (raised western end), which could be pulled out. <i>Daucus carota</i> confirmed.	14.7
wasc1014f	Ashland	Floodplain system, not representative of a native plant community, highly disturbed. Includes one spot in the south along the creek bend with a few garlic mustard. Nipplewort quite common. Canopy mostly <i>Populus balsamifera</i> with <i>Fraxinus pennsylvanica</i> . <i>Galium boreale</i> also present.	15.9
wasc1041f	Ashland	Wetland is a rich mesic to wet forest east of river, with mixed canopy (interrupted to continuous) of <i>Acer saccharum</i> , <i>Fraxinus nigra</i> , <i>Thuja occidentalis</i> , and <i>Acer rubrum</i> , and more of a disturbed floodplain with patchy canopy west of river. The non-native species were observed along the riverbank and outwash areas.	16.6

Wetland Feature	County	Community Description	Nearest Milepost
wasc1045e/f	Ashland	Wetland is a wet meadow with sparse canopy of species present in adjacent forest. The northern portion is located at edge of power line corridor and southern portion runs through an otherwise forested area. The southern portion is dominated by <i>Matteuccia struthiopteris</i> . Forest portion with an interrupted canopy of <i>Acer rubrum</i> , <i>Acer saccharum</i> , <i>Tilia americana</i> , and <i>Fraxinus pennsylvanica</i> . The ground layer has intermittent cover and is dominated by ferns and sedges.	16.8
wasb1004f	Ashland	Wetland is a narrow-forested drainage way with a canopy of <i>Fraxinus pennsylvanica</i> with <i>Populus tremuloides</i> , and <i>Acer rubrum</i> . Ground layer consisting of <i>Carex gracillima</i> along with <i>Carex arctata</i> , <i>Scirpus hattorianus</i> , and <i>Onoclea sensibilis</i> . With a hayfield to the north. Conditions very dry at the time of this survey.	17.2
wase001e	Ashland	Feature is an open bog dominated by leatherleaf. Along the ecotone between the bog and woodland, <i>Populus tremuloides</i> , <i>Betula papyrifera</i> , <i>Acer rubrum</i> , <i>Carex utriculata</i> , and <i>Scirpus cyperinus</i> are abundant.	18.5
wasd1024e/f1/f2/s	Ashland	A wetland complex that include wet meadow, wet forest, acid peatland and open bog. The wet meadow is dominated by <i>Calamagrostis canadensis</i> , with <i>Scirpus cyperinus</i> and scattered trees are present along the edges of the feature. The wet forest is dominated by <i>Populus tremuloides</i> . Several rises are present in feature, where more upland-associated species are present. Common ground layer species include bunchberry, <i>Athyrium filix-femina</i> , <i>Equisetum sylvaticum</i> , <i>Rubus pubescens</i> , and <i>Pteridium aquilinum</i> . The acid peatland includes a patchy canopy of black spruce. The ground layer is underlain by sphagnum and dominant vascular species include <i>Chamaedaphne calyculata</i> , <i>Carex trisperma</i> , and <i>Carex oligosperma</i> . The more minerotrophic species, such as paper birch, alder, and broad-leaved sedges, were observed to occur in the ecotonal zone closer to the wet meadow. and the open bog is dominated by <i>Chamaedaphne calyculata</i> . The more minerotrophic species present, such as <i>Betula papyrifera</i> , <i>Calamagrostis canadensis</i> , <i>Scirpus cyperinus</i> , and <i>Acer rubrum</i> , are restricted to the ecotone between the bog and adjacent woodland.	18.9
wasd1028f	Ashland	Forested wetland on a slope with active discharge hydrology. Canopy a mix of <i>Thuja occidentalis</i> , <i>Fraxinus nigra</i> , <i>Acer rubrum</i> , <i>Fraxinus pennsylvanica</i> , with <i>Populus tremuloides</i> , <i>Abies balsamea</i> , <i>Betula alleghaniensis</i> and paper birch. <i>Carex scabrata</i> dominant in sloped areas with strong discharge. Both <i>Equisetum hyemale</i> and <i>Equisetum scirpoides</i> are very common. Directly associated with a waterbody. Young pagoda dogwoods present in the seepage. Heavily wormed.	19.2
wasal39f_x	Ashland	Forest wetland. Open pools in spots, otherwise vegetated by <i>Carex bromoides</i> , <i>Matteuccia struthiopteris</i> , and <i>Glyceria striata</i> with <i>Fraxinus nigra</i> and <i>Acer saccharum</i> canopy. <i>Acer saccharum</i> on elevated mounds. Drier portions consisting of <i>Thalictrum dasycarpum</i> , <i>Carex gracillima</i> , <i>Maianthemum canadense</i> , and <i>Calystegia sepium</i> . Not great quality. Probably functions more like a floodplain forest.	20.2
wasv013f	Ashland	Feature is a hardwood swamp on a gradual slope within a mesic forest. The canopy is largely dominated by <i>Fraxinus pennsylvanica</i> , with occasional <i>Betula alleghaniensis</i> , <i>Acer saccharum</i> and <i>Tilia americana</i> . The feature has variable microtopography with more upland-associated species found on rises/boulders within the wetland.	20.8
wasv019e/f	Ashland	The wet meadow component is degraded and dominated by <i>Juncus effusus</i> . The feature is grazed with cattle prints present and is likely resulting in the presence of many of the observed ruderal species. Few areas of <i>Sphagnum</i> are present, with occasional groves of young <i>Thuja occidentalis</i> . The coniferous swamp component includes a continuous canopy dominated by <i>Thuja occidentalis</i> , with <i>Betula alleghaniensis</i> and <i>Fraxinus nigra</i> also common. The feature is grazed, with cattle prints and dung present. In canopy openings, <i>Impatiens capensis</i> dominant in the ground layer.	21.3

Wetland Feature	County	Community Description	Nearest Milepost
wasv059f1	Ashland	Feature is a wet forest located on a gradual slope that appears to function as a drainage; it is partially underlain with boulders, resulting in variable microtopography. The canopy is mostly continuous, dominated by <i>Fraxinus nigra</i> , <i>Acer rubrum</i> , <i>Betula alleghaniensis</i> , and <i>Tilia americana</i> . The ground layer cover is patchy.	22.3
wasc069s	Ashland	Feature is dominated by tall (generally >2 m) <i>Alnus incana</i> , with scattered trees, namely <i>Abies balsamea</i> , and <i>Fraxinus pennsylvanica</i> . The ground layer is largely dominated by graminoids, with <i>Glyceria striata</i> generally being the most abundant.	22.6
wasc071f	Ashland	Feature is a hardwood swamp; the canopy is interrupted to continuous with <i>Fraxinus nigra</i> the dominant tree and variable cover of <i>Thuja occidentalis</i> , <i>Tsuga canadensis</i> , <i>Betula alleghaniensis</i> , <i>Acer rubrum</i> , and <i>Ulmus americana</i> . The ground layer is variable with small pockets of sparse vegetation and other areas with interrupted vegetation. Ferns and fern allies, along with graminoids, generally are dominant in this layer.	22.7
wasc072f	Ashland	Feature is a hardwood swamp with an interrupted to continuous canopy of <i>Fraxinus nigra</i> , <i>Acer rubrum</i> , and <i>Betula alleghaniensis</i> , with occasional <i>Ulmus americana</i> and <i>Fraxinus pennsylvanica</i> . The ground layer is largely dominated by graminoids, namely <i>Carex bromoides</i> . A few small areas in the southwest portion of the feature were sparsely vegetated at the time of the survey and may function as vernal pools.	22.9
wasc074e	Ashland	Feature is a sedge meadow dominated by <i>Carex bromoides</i> , occurring along a gradual drainage within a mesic forest. Trees present within the feature are primarily rooted along the edge of the wetland.	22.9
wasb011f	Ashland	Southern leg of forested wetland logged (winter logging). Canopy dominated by <i>Fraxinus nigra</i> and ground layer dominated by <i>Carex bromoides</i> . Linear basin feature.	23.4
was038f	Ashland	A Black ash swamp that meanders in and out of the evaluated corridor. Canopy of <i>Fraxinus nigra</i> , occasional <i>Betula alleghaniensis</i> . Alder in shrub layer with <i>Carex bromoides</i> , along with <i>Carex crinita</i> , <i>Carex gracillima</i> , <i>Carex scabrata</i> , <i>Thalictrum dasycarpum</i> , and <i>Symphyotrichum lateriflorum</i> in the ground layer. There is <i>Abies balsamea</i> throughout. This is the narrative for the western component which is the main component: includes small portions of upland, with species excluded from the plant list for the most part. Groundwater discharge likely on the western side, which is sloped towards the southeast. <i>Carex bromoides</i> and <i>Fraxinus nigra</i> prevalent on the slope. This area is a sloped wetland. Includes drainage ways with wetland fringes of various size going upslope for the separate segments.	23.7
wasd1008f	Ashland	Floodplain forest of <i>Acer saccharinum</i> with <i>Fraxinus pennsylvanica</i> . The ground layer is dominated by <i>Matteuccia struthiopteris</i> with <i>Laportea canadensis</i> and <i>Fallopia cilinodis</i> . Several key invasives are present: <i>Alliaria petiolata</i> present but rare and localized on east end, then present but very uncommon elsewhere. <i>Fallopia cilinodis</i> throughout (5-25%); reed canary grass on the east end (rare), but along the river. Buckthorn is present but rare. Low species diversity.	24.2
wasd1010f	Ashland	The feature is logged. A portion of the feature consists of two drainage ways on the western and eastern end of the mapped feature, on slope topography. There is <i>Carex cf. bebbii</i> present. <i>Typha</i> is present but rare and restricted to one location. <i>Hieracium aurantiacum</i> in one location, in less than a two-foot area. <i>Cirsium vulgare</i> in two spots but less than 6 individuals collectively. Dominated by hydrophytic vegetation but origin likely due to logging associated with existing drainage ways. No longer forested, but had been when originally delineated.	25.5
wasd1009f	Ashland	A small depressional forested pocket within a mesic hardwood forest. Blowdown nearby. Basin with tree cover along the perimeter.	25.7
wasv042f	Ashland	Linear wet forest community of <i>Fraxinus nigra</i> (interrupted canopy). Prominent species in the ground layer include <i>Carex crinita</i> , <i>Lycopus uniflorus</i> , <i>Bidens frondosa</i> , and <i>Iris versicolor</i> . Elevated mound associated with <i>Fraxinus nigra</i> . Intact system surrounded by mesic hardwoods. Ran out of area to cover.	26.3

Wetland Feature	County	Community Description	Nearest Milepost
wasv039f	Ashland	Wet forest community that includes a forest trail (this portion not actually wetland). Main portion with an interrupted canopy of <i>Fraxinus nigra</i> . Portions inundated in the spring are devoid of vegetation, where vegetated areas in the ground layer include <i>Carex bromoides</i> along with cinnamon fern.	26.4
wasv053f	Ashland	Forested drainage way which includes a number of upland species. Mixed open canopy of <i>Fraxinus nigra</i> , <i>Betula alleghaniensis</i> , <i>Fraxinus pennsylvanica</i> along with <i>Tilia americana</i> and <i>Acer saccharum</i> east of area mapped as PEM (seems to be a mosaic of upland and wetland). PEM portion really should be forested. Obvious forested wetland west of the mapped PEM, much higher in terms of quality than those area affected by logging. This is on a slope with groundwater discharge, canopy of <i>Fraxinus nigra</i> and ground layer with near continuous cover of <i>Carex scabrata</i> .	27.5
wasw023ss	Ashland	Originally classified by the delineator as an alder-thicket. Part of an overall wetland complex that includes a forested component excluded here. Open portions dominated by <i>Calamagrostis canadensis</i> , <i>Eutrochium maculatum</i> , <i>Solidago gigantea</i> , <i>Galium asprellum</i> , <i>Clematis virginiana</i> , and <i>Persicaria sagittata</i> . <i>Symphytotrichum lanceolatum</i> is present. Alder thicket associated with darker signature in the south portion of the feature. Includes waterbody flowing through with alder in the shrub layer and ground layer consisting of mostly <i>Carex bromoides</i> , along with <i>Carex scabrata</i> , <i>Equisetum fluviatile</i> , <i>Rubus pubescens</i> , and <i>Equisetum sylvaticum</i> . Only two cattail individuals, assuming <i>T. x glauca</i> but no flowers/fruits. Several <i>Cirsium arvense</i> individuals were observed. Two separate locations with the open portion, each with two individuals. On a slope with discharge as the primary source of hydrology. Southeast corner transitions from wet forest to mesic hardwood forest.	28.7
wasw024f	Ashland	Sloped forested <i>Fraxinus nigra</i> community with discharge hydrology. Includes upland species like <i>Pteridium aquilinum</i> and <i>Eurybia macrophylla</i> . Ground layer dominated by <i>Carex bromoides</i> where open (shrub layer that is). Good condition. A few individuals of <i>Hieracium aurantiacum</i> found on the east end with <i>Eurybia macrophylla</i> . Strong area of seepage in the southeast portion of the feature. Seepage area consists of <i>Scutellaria lateriflora</i> , <i>Galium asprellum</i> , <i>Impatiens capensis</i> , and <i>Chrysosplenium americanum</i> .	28.8
wasw021f	Ashland	Mostly mesic hardwood species. Ground layer dominants include <i>Carex pedunculata</i> , <i>Mitchella repens</i> pool, <i>Acer saccharum</i> saplings, <i>Maianthemum canadense</i> , and <i>Pteridium aquilinum</i> . Also includes <i>Quercus rubra</i> . <i>Carex disperma</i> observed in one location.	29.4
wasw025f/wasw026f	Ashland	Mosaic of upland and wetland on the south end. Canopy of <i>Acer saccharum</i> with <i>Fraxinus pennsylvanica</i> , <i>Ostrya virginiana</i> , and <i>Acer rubrum</i> . Canopy is patchy to interrupted; low-lying areas in the open include <i>Scirpus cyperinus</i> , <i>Calamagrostis canadensis</i> , and <i>Persicaria sagittata</i> . Upland areas with thinned <i>Acer saccharum</i> and ironwood in the understory and a ground layer of <i>Lonicera canadensis</i> , <i>Carex pedunculata</i> , and <i>Fraxinus pennsylvanica</i> saplings. The second photo of a small open depression is dominated by <i>Calamagrostis canadensis</i> and <i>Scirpus cyperinus</i> , with <i>Carex crinita</i> , <i>Solidago gigantea</i> and <i>Onoclea sensibilis</i> .	29.5
wasw013ss	Ashland	The feature is a beaver complex with pockets of wet meadow, alder thicket, and hardwood swamp. Overall, shrub cover in the mapped wetland is around 50%, but sizeable areas without shrubs (e.g., wet meadow) are present. The hardwood swamp to the southwest also grades into the wetland, hence the presence of more forest-associated species. The ground layer is variable overall, but red raspberry is abundant in the open and shrub-dominated portions. There is a beaver dam present on the northeast side of the feature.	29.8

Wetland Feature	County	Community Description	Nearest Milepost
wasw012f	Ashland	Feature is a hardwood swamp, with a canopy dominated by <i>Fraxinus nigra</i> . Much of the canopy (at least in the northeast section), appears to have dieback, leading to patchy cover in some areas. Here, where more sunlight reaches the ground layer, orange jewelweed, bittersweet nightshade, and <i>Doellingeria umbellata</i> are abundant. In areas where the canopy is more interrupted, the ground layer is variable, often with abundant sedges, such as <i>Carex bromoides</i> and nodding sedge.	30.0
wirb1002f	Iron	The feature is a wet forest community dominated by <i>Fraxinus nigra</i> with <i>Acer saccharum</i> , <i>Tilia americana</i> and <i>Betula alleghaniensis</i> . Sloped topography with groundwater discharge. Mixed ground layer of <i>Carex scabrata</i> , <i>Glyceria striata</i> , <i>Athyrium filix-femina</i> , and <i>Solidago gigantea</i> .	30.7
wirb1005f	Iron	Vernal pool with <i>Fraxinus nigra</i> along the perimeter. Pool devoid of vegetation with the exception of <i>Fraxinus nigra</i> seedlings. Most herbaceous cover is restricted to the perimeter of the feature. Species poor and excessively wormed.	30.8
wirb1006f	Iron	Degraded forested drainage features, sloping north, with shallow bedrock. Primarily <i>Acer saccharum</i> mixed with <i>Fraxinus pennsylvanica</i> , very little ground layer, heavily wormed with little to no leaf duff. Hydrology is questionable at this time of year. A number of uprooted trees with wetland. Reed canary grass and <i>Cirsium arvensis</i> in one location near start of tributary. Nipplewort coming in from the trail.	30.9
wirb1007f	Iron	Large wet forest complex; earthworms an issue. Forested seepage pockets dominated by <i>Carex scabrata</i> with <i>Equisetum scirpoides</i> , <i>Athyrium filix-femina</i> , <i>Fraxinus nigra</i> , and <i>Betula alleghaniensis</i> . One individual <i>Epipactis helleborine</i> is present.	31.3
wirb009f_x	Iron	Depressional forested Wetland, anthropogenic in origin (a former mining area) with undulating topography. Wetter locations are dominated by <i>Carex crinita</i> with <i>Fraxinus pennsylvanica</i> in the shrub layer and <i>Populus tremuloides</i> in the canopy. Species depauperate. <i>Prunella vulgaris</i> quite common.	31.4
wirb015e	Iron	Beaver meadow which includes a dam. West of the dam is drier and dominated by <i>Rumex obtusifolius</i> , <i>Scirpus cyperinus</i> , <i>Juncus effusus</i> , <i>Onoclea sensibilis</i> , and <i>Scirpus microcarpus</i> . Minimal shrub cover in the beaver meadow portion. The open water portion east of the dam is inundated and bordered by <i>Sparganium angustifolium</i> and <i>Potamogeton</i> cf. <i>natans</i> in the water. <i>Cirsium</i> and <i>Phalaris</i> present but isolated and uncommon.	31.8
wird026f	Iron	Feature is a linear depression with a mix of <i>Populus tremuloides</i> and <i>Fraxinus nigra</i> in the canopy. Ground layer consisting of <i>Calamagrostis canadensis</i> , <i>Equisetum pratense</i> , <i>Onoclea sensibilis</i> , <i>Carex scabrata</i> , and <i>Solidago gigantea</i> . Includes shallow pools/depressions, now dry.	32.7
wird027f	Iron	Feature is a <i>Fraxinus nigra</i> dominated wet forest with dry pools throughout and <i>Fraxinus nigra</i> elevated on mounds with <i>Populus tremuloides</i> mixed in throughout. Ground layer commonly includes <i>Glyceria striata</i> , <i>Carex gracillima</i> , <i>Rubus pubescens</i> , and <i>Onoclea sensibilis</i> . Includes small upland mounds throughout which include upland species like bracken fern. Shallow bedrock.	32.8
wire1001e/f	Iron	A complex of emergent and forested wetland. The emergent portion is within the forested portion and is dominated by <i>Phalaris arundinacea</i> , but includes <i>Petasites frigidus</i> var. <i>sagittatus</i> . The forested portion is dominated by <i>Fraxinus nigra</i> with ground layer with interrupted cover of both forbs and graminoids. Commonly observed species include <i>Carex bromoides</i> , <i>Glyceria striata</i> , <i>Onoclea sensibilis</i> , <i>Doellingeria umbellata</i> , <i>Packera aurea</i> , and <i>Solidago gigantea</i> . <i>Phalaris arundinacea</i> present but not common, two locations within feature.	33.0

Wetland Feature	County	Community Description	Nearest Milepost
wird028f	Iron	A wet forest dominated by <i>Fraxinus nigra</i> (main part). Includes lower quality areas associated with existing logging/two-track roads. Intact areas with a canopy of <i>Fraxinus nigra</i> along with <i>Carex crinita</i> , <i>Glyceria striata</i> , and <i>Micranthes pennsylvanica</i> present. Other characteristic species include <i>Packera aurea</i> , <i>Mitella nuda</i> , and <i>Symphyotrichum lateriflorum</i> . It is a seepage-influenced feature. The western portion of the access road has compacted soils. Access road add one: <i>Juncus effusus</i> , <i>Scirpus hattorianus</i> , and <i>Persicaria sagittata</i> . The northern segment is drier and sloped southward on shallow bedrock. The vegetation on the access road was not included in the survey.	33.2
wirb044f	Iron	A <i>Fraxinus nigra</i> dominated wet forest with open non-inundated pools. The ground layer consists of <i>Carex crinita</i> along with <i>Symphyotrichum lateriflorum</i> , <i>Dryopteris carthusiana</i> , and <i>Rubus pubescens</i> ; fairly uniformed throughout.	33.4
wirb046f	Iron	Small forest depression on shallow bedrock. Mix of <i>Populus tremuloides</i> with <i>Fraxinus nigra</i> . The ground layer includes <i>Carex crinita</i> , <i>Mitchella repens</i> (elevated), and <i>Rubus pubescens</i> . Shallow dry pools.	33.4
wirb042f	Iron	The portion to the south is an intact Black ash swamp with a continuous canopy cover of <i>Fraxinus nigra</i> and a ground layer of <i>Calamagrostis canadensis</i> , <i>Carex crinita</i> , and <i>Doellingeria umbellata</i> . <i>Rubus pubescens</i> is present but restricted to elevated mounds.	33.6
wirb039s	Iron	Depression over shallow bedrock with small, elevated rises within. Really a wet meadow but has enough shrub cover to be a PSS thus shrub-carr. Not representative of a natural wetland community. Likely affected by logging in the past. Includes a linear finger of <i>Fraxinus nigra</i> .	33.7
wirb037s	Iron	Riverine fringe floodplain wetland, that includes a linear vernal pool. Not a truly definable wetland plant community, but rather a floodplain feature.	34.0
wirc022f	Iron	Several waterbody features within a linear forested depression dominated by <i>Fraxinus nigra</i> , <i>Abies balsamea</i> , and <i>Acer saccharum</i> . Includes a mix of upland and wetland species. Not a typical wet forest system (more of a floodplain) on west end but with <i>Fraxinus nigra</i> and <i>Carex bromoides</i> on east end (more typical of a wet forest). Abuts a major river east of the survey corridor. Beaver activity present and nipplewort present on the west end.	34.1
wirc023f	Iron	Floodplain forest where the surrounding upland is clearly more elevated. Includes both <i>Acer saccharum</i> and <i>Acer saccharinum</i> . Ground layer with patchy cover, mostly bare. Likely inundated for a portion of the growing season. Includes species on the lower shelf of the river. <i>Hypericum perforatum</i> is localized along the shore. One wood turtle was observed.	34.1
wirc021f	Iron	<i>Fraxinus nigra</i> dominated wet forest with interrupted graminoid cover that includes <i>Carex tuckermanii</i> , <i>Carex crinita</i> , <i>Glyceria striata</i> , <i>Carex gracillima</i> , and <i>Carex projecta</i> . Western poison ivy common in the south of the wetland. Includes portions along an access road. Plants occurring on the access road include <i>Scirpus atrocinctus</i> , <i>Salix bebbiana</i> , <i>Salix petiolaris</i> , <i>Eutrochium graminifolia</i> , and <i>Equisetum sylvaticum</i> .	34.2
wirc024f	Iron	Feature a small depressional wet forest pocket with a canopy of <i>Fraxinus nigra</i> . Includes several upland species.	34.2
wirc025f	Iron	A <i>Fraxinus nigra</i> dominated wet forest community over shallow bedrock, poorly formed soils. Elevated mounding throughout. Slopes southwest, relying on both recharge and discharge hydrology. Drier on north end and includes more upland mounding.	34.3

Wetland Feature	County	Community Description	Nearest Milepost
wirc013f_x	Iron	A wet forest with strong discharge. Canopy mostly <i>Fraxinus nigra</i> with <i>Abies balsamea</i> in the understory. Seepage pools with <i>Glyceria striata</i> , <i>Toxicodendron rydbergii</i> , <i>Carex bromoides</i> and <i>Scutellaria galericulata</i> present. Mounded areas associated with seepage areas are populated with <i>Coptis trifolia</i> , <i>Mitella nuda</i> and <i>Rubus pubescens</i> . <i>Acer spicatum</i> is common throughout. <i>Thuja occidentalis</i> is prevalent with <i>Fraxinus nigra</i> in wetter locations with inundated pools at the beginning of September. The wetland is drier on the south end, with <i>Acer rubrum</i> and <i>Acer saccharum</i> common. This area is more of a mosaic of wetland and upland.	34.5
wirc1022f	Iron	Feature is a fully vegetated vernal pool dominated by <i>Carex tuckermanii</i> . The surrounding area was selectively logged. <i>Calystegia sepium</i> and <i>Scutellaria lateriflora</i> are common throughout.	34.8
wirc1019f	Iron	Feature has an interrupted canopy dominated by <i>Fraxinus nigra</i> , with <i>Acer rubrum</i> . The understory is fairly open with an interrupted to continuous ground layer dominated by graminoids and ferns.	34.9
wirc014e	Iron	Feature is a wet meadow located within a roadside ditch. Dominant species include <i>Solidago canadensis</i> , <i>Carex crinita</i> , <i>Calamagrostis canadensis</i> , <i>Eutrochium maculatum</i> , and <i>Onoclea sensibilis</i> . Tree species present in feature are generally seedlings or saplings.	35.1
wirc014f_x	Iron	A wet forest community dominated by <i>Fraxinus nigra</i> with <i>Betula alleghaniensis</i> . <i>Acer saccharum</i> is also present, but is much less common than <i>Betula alleghaniensis</i> . The topography is undulating, with <i>Thuja occidentalis</i> common in sapling size and one single large individual. The ground layer is dominated by <i>Carex crinita</i> , <i>Glyceria striata</i> and <i>Calamagrostis canadensis</i> .	35.1
wirc1016f	Iron	Feature has an interrupted to continuous canopy, largely dominated by <i>Acer rubrum</i> , with <i>Betula alleghaniensis</i> , <i>Tsuga canadensis</i> , and <i>Fraxinus nigra</i> also common. <i>Tsuga canadensis</i> and <i>Abies balsamea</i> are common in the subcanopy. The ground layer has variable microtopography with mossy hummocks and hollows and is dominated by ferns and graminoids.	35.3
wirc006f	Iron	Depressional wetland, previously logged, surrounded by mesic hardwoods. Feature dominated by <i>Impatiens capensis</i> . Other prevalent species include <i>Scirpus cyperinus</i> , <i>Glyceria canadensis</i> , <i>Glyceria striata</i> and <i>Carex projecta</i> . <i>Dryopteris intermedia</i> is also common in the ground layer.	35.5
wira008f/s	Iron	A wetland complex that includes wet forest and alder thicket. The forested portion appears to have been thinned at some point and has patchy cover of canopy trees, with <i>Acer rubrum</i> dominant. The shrub layer is patchy, common species including <i>Corylus cornuta</i> and <i>Betula alleghaniensis</i> and <i>Acer rubrum</i> saplings. The ground layer is continuous and dominated by <i>Carex intumescens</i> , with ferns also common. The shrub component has interrupted cover of <i>Alnus incana</i> . The ground layer is generally interrupted to continuous. Largely dominated by ferns and graminoids, but becomes sparse in the deep shade of the alders adjacent to the small stream that intersects the feature.	35.9
wira008e/f_x	Iron	A multi-community feature of wet forest with a small emergent component. The forest portion has a varying microtopography throughout. The canopy consists of <i>Betula alleghaniensis</i> , <i>Tsuga canadensis</i> , and <i>Thuja occidentalis</i> . Not the wettest feature, but still wetland. The ground layer is depauperate. The emergent portion is a small fringe associated with a waterbody feature.	35.9
wirc1002f	Iron	The feature is a wet forest. In the southern portion, the canopy is interrupted with <i>Fraxinus nigra</i> , <i>Tsuga canadensis</i> , <i>Thuja occidentalis</i> , and <i>Betula alleghaniensis</i> . In the northern portion, <i>Fraxinus nigra</i> becomes dominant in the canopy and is patchy to interrupted, with American elm, <i>Fraxinus pennsylvanica</i> , and <i>Acer saccharum</i> common in the subcanopy. The ground layer is variable; <i>Carex bromoides</i> , <i>Rubus pubescens</i> , <i>Calamagrostis canadensis</i> , <i>Glyceria striata</i> , and ferns are common throughout the feature.	37.4

Wetland Feature	County	Community Description	Nearest Milepost
wird003e/f	Iron	A wetland complex that includes forested wetland and emergent wetland. Approximately the southern 2/3rds of the emergent feature appears to function as a vernal pool, as vegetation is relatively sparse-patchy. In the northern third, a forest trail intersects the feature, and vegetation north of that is more continuous. Canopy species include <i>Acer saccharum</i>, <i>Fraxinus nigra</i>, <i>Acer rubrum</i>, and American elm. Ferns and sedges are common in the ground layer. The true forested wetland component has a variable canopy, with areas dominated by <i>Fraxinus nigra</i>, and others mixed with <i>Tsuga canadensis</i>, <i>Thuja occidentalis</i>, <i>Betula alleghaniensis</i>, and <i>Acer saccharum</i>. <i>Ulmus americana</i> is common in the subcanopy. The ground layer is typically sparser in areas with abundant conifers than areas dominated by <i>Fraxinus nigra</i>. Common ground layer species include <i>Glyceria striata</i>, <i>Rubus pubescens</i>, <i>Carex crinita</i>, and ferns.	37.6
wird001f	Iron	Feature has a mostly continuous canopy of <i>Fraxinus pennsylvanica</i>, <i>Acer saccharum</i>, <i>Acer rubrum</i>, <i>Tilia americana</i>, <i>Betula alleghaniensis</i>, and <i>Thuja occidentalis</i>. The ground layer is often continuous and dominated by <i>Matteuccia struthiopteris</i>. Certain species, such as <i>Acer saccharinum</i>, are mostly limited to areas more adjacent to the river, as are certain species occurring on the sandbar adjacent to the river (e.g., <i>Mimulus ringens</i>, <i>Apocynum androsaemifolium</i>, <i>Carex hystericina</i>, etc.).	37.8
wira016f	Iron	The canopy is largely continuous, with <i>Tsuga canadensis</i>, <i>Acer rubrum</i>, and <i>Acer saccharum</i> among the dominant species. The ground layer has variable microtopography and generally sparse cover, with interrupted fern, <i>Athyrium filix-femina</i>, and <i>Onoclea sensibilis</i> among the most common species.	37.9
wird006f	Iron	Feature was noted as a hardwood swamp. Almost the entire wetland within this survey area was logged recently, removing/logging an entire stretch running north/south. The wetland is obviously disturbed as a result. The portion that is not logged is in good shape and is sloped down to the east with dry pools. This portion consists mostly of <i>Carex crinita</i> in the ground layer with <i>Acer rubrum</i> above. The portion that was logged drains into this portion. The western logged portion was likely mapped with the idea that this drains east where all the <i>Carex crinita</i> is located. A number of species, including <i>Hieracium aurantiacum</i>, <i>Lobelia inflata</i>, <i>Galeopsis tetrahit</i> and <i>Erechtites hieraciifolius</i> were present in the portions that were logged.	38.1

Appendix G – Botanical Field Lead Resumes



Scott A. Milburn, MS, PWS, CMWP

Principal Botanist/Ecologist/CFO



EXPERTISE

- Rare Plant Surveys
- Plant Identification
- Vegetation Monitoring
- Wetland Delineations
- Native Plant Community Classification/Mapping
- Habitat Assessments
- Aerial Photo Interpretation

EDUCATION

MS Biological Sciences

University of Mississippi

Thesis: *Chemical and Microbial Properties of Wintertime Flooded Agricultural Soils from the Mississippi Delta.*

BS Botany

Iowa State University

CERTIFICATIONS/PERMITS

- Professional Wetland Scientist (1609)
- Certified MN Wetland Professional (1214)
- MN DNR Qualified Surveyor for:
All General State-listed Vascular Plants and specialized species:
 - o *Botrychium/Sceptridium*
 - o *Erythronium propullans*
 - o *Lespedeza leptostachya*
 - o *Platanthera praeclara*
- MN DNR Special Permit (32815) to collect and voucher rare plants
- Wisconsin Rare Plant Surveyor

TECHNICAL DOCUMENTS

- Floristic Quality Assessment for Prairie Parkland and Tallgrass Aspen Parklands Provinces (2019) – Project Leader
- Floristic Quality Assessment for Minnesota Wetlands (2007) – Primary Author

Scott Milburn is the founder of Midwest Natural Resources (MNR), a natural resources consulting firm focused on field services and data reporting pertaining to flora, wetlands, and wildlife. He is an academically trained botanist with further graduate studies in wetland biogeochemistry. He has been working professionally for over 20 years, running the St. Paul, Minnesota-based MNR since 2005. Scott has managed, as well as conducted, intensive field surveys for a wide range of projects focused on long-term vegetation monitoring, rare plant and botanical surveys, large-scale wetland delineation efforts, and native plant community mapping and analysis projects. He was additionally the lead developer for the Floristic Quality Assessment for Minnesota Wetlands (2007) and has since led the development of regionalized Coefficients of Conservatism based on ecological province in Minnesota.

SELECTED NATIVE PLANT COMMUNITY MAPPING/CLASSIFICATION PROJECT EXPERIENCE

Sprague's Creek Peatland SNA (2020-2021)

Project Manager and field lead for the ecological evaluation of Sprague's Creek Peatland SNA, located in northern Minnesota. Responsibilities included the establishment of permanent relevé plots and point-intercept sampling transects, mapping of native plant communities, and rare plant surveys.

Iron Range OHV Project (2019)

Project Manager overseeing field efforts for the mapping of native plant communities for a project encompassing over 2,700 acres in northern Minnesota. Responsibilities included the aerial delineation of community boundaries and refinement of those boundaries using data collected by field staff.

Seavey Peatland – Natural Resources Inventory Project (2017)

Project Manager and field lead for efforts involving native plant community mapping, wetland delineations, and rare plant surveys for a proposed peat mine encompassing over 2,800 acres in northern Minnesota. Developed field protocols, implemented field efforts, conducted data review, mapped plant communities, and summarized data for the client. The project additionally involved the use of proprietary data applications pertaining to the documentation of wetlands as well as rare plant survey efforts.

Norman / Polk Counties – Calcareous Fen Inventory (2012)

Project Manager and field botanist responsible for identifying previously undocumented calcareous fens in NW Minnesota. This involved the collection of vegetation (relevé) plot data, documentation of rare plant populations, and mapping of newly documented calcareous fen locations. This effort was the result of compensatory mitigation requirements put forth by the Minnesota Department of Natural Resources due to construction impacts to rare plant populations. Data were summarized in a report prepared for the Minnesota Department of Natural Resources.

Trail / Gully – Calcareous Fen Inventory (2010-2011)

Project Manager and field botanist responsible for identifying previously undocumented calcareous fens in NW Minnesota. This involved the collection of vegetation (relevé) plot data, documentation of rare plant populations, and mapping of newly documented calcareous fen locations. This effort was the result of compensatory mitigation requirements put forth by the Minnesota Department of Natural Resources due to construction impacts to rare plant populations. Data were summarized in a report prepared for the Minnesota Department of Natural Resources.

SELECTED RARE PLANT SURVEY PROJECTS

Projects listed below are selected from numerous rare plant survey projects Scott has completed. In addition to the larger-scale projects listed below, Otto has led over one hundred small-scale rare plant surveys for development projects through the metro area. Standard methods for rare plant surveys always entail collecting a comprehensive plant species list, collecting voucher specimens where appropriate and submitting specimens to the Bell Museum of Natural History (MIN), as well as submitting spatial data for any rare plant detections to the DNR for inclusion in the NHIS database.

TMM – Rare Plant Surveys (2020-2021) Lake County, Minnesota

Botanical field lead responsible for conducting surveys for state-listed plant and lichen species for potential mine site in northeastern Minnesota.

Superior National Forest – Rare Plant Surveys (2006–2012, 2014–2015, 2020) Lake, Cook, St. Louis counties, Minnesota

Botanical field lead responsible for conducting surveys for state-listed plant species throughout the Superior National Forest.

MN DNR Cuyuna Country State Recreation Area – Rare Plant Surveys (2018, 2020, 2022) Crow Wing County, Minnesota

Responsible for conducting surveys for Minnesota state-listed plant species for a proposed recreation trail project. Surveys focused on moonworts (*Botrychium*).

Sandpiper/Line 3 Replacement – Rare Plant Surveys (2013-2020) Minnesota, Wisconsin

Lead field botanist responsible for conducting surveys for state-listed plant species along the project route in Minnesota and Wisconsin.

Chippewa National Forest – Rare Plant Surveys (2007-2016, 2019) Beltrami, Itasca, and Cass counties, Minnesota

Botanical field lead responsible for conducting surveys for state-listed plant species throughout the Chippewa National Forest for 10 consecutive field seasons. Field efforts included stand evaluations and invasive species documentation within the surveyed stands.

SELECTED VEGETATION MONITORING PROJECT EXPERIENCE

Line 3 Replacement Project – Post-construction Ecological Monitoring (2020-Current)

Principal Ecologist responsible for the monitoring design of required post-construction long-term vegetation monitoring efforts associated with the Line 3 Replacement Project (Minnesota). Worked in collaboration with the Minnesota Department of Natural Resources, Minnesota Pollution Control Agency, and the client to develop monitoring protocols for peatland complexes, calcareous fens, and other sensitive wetland systems.

Prairie Monitoring – Long-term Vegetation Monitoring (2008-2022)

Principal Project Manager overseeing MNR's implementation of vegetation monitoring of high-quality remnant prairie sites throughout the Prairie Parklands and Tallgrass Prairie Parklands ecological provinces in Minnesota. This has been through contract with the Minnesota Department of Natural Resources in association with the Grassland Monitoring Team, a multi-agency group of grassland managers and scientists.

Gully 30 - Calcareous Fen Monitoring (2011-2020)

Principal Project Manager responsible for the collecting of detailed vegetation plot data at the state-designated Gully 30 Calcareous Fen located in NW Minnesota. Sampling has occurred over a period of ten years, involving the documentation of bryophytes and vascular plants, as well as hydrologic monitoring efforts. This project was the result of regulatory requirements requested by the Minnesota Department of Natural Resources as part of compensatory mitigation for construction impacts (Alberta Clipper Project).

Chester 24 - Calcareous Fen Monitoring (2011-2015)

Principal Project Manager responsible for the collecting of detailed vegetation transect data at the state-designated Chester 24 Calcareous Fen located in NW Minnesota. Sampling occurred over a period of five years and involved the documentation of vascular

plants as well as hydrologic monitoring. This project was the result of regulatory requirements requested by the Minnesota Department of Natural Resources as part of compensatory mitigation for construction impacts.

Alberta Clipper – Post-construction Wetland and Waterbody Monitoring (2011-2015)

Principal Project Manager responsible for overseeing and implementing field efforts and data analysis related to wetland/waterbody monitoring for the Alberta Clipper Project. This was a part of the federal permit requirement requested by the US Corps of Engineers. The project involved the monitoring of 666 wetlands and 187 waterbodies in Minnesota and Wisconsin.

Kasota 7 - Calcareous Fen Monitoring (2014-2020)

Principal Project Manager responsible for overseeing the collection of vegetation monitoring data at the state-designated Kasota 7 Calcareous Fen located in southern Minnesota. This project was the result of regulatory requirements requested by the Minnesota Department of Natural Resources as part of compensatory mitigation for permanent impacts to the recharge zone associated with the Kasota 7 Calcareous Fen.

SELECTED ASSESSMENT TOOL DEVELOPMENT EXPERIENCE

Floristic Quality Assessment for Laurentian Mixed Forest and Eastern Broadleaf Forest Provinces (2021-2022)

Project co-lead overseeing the development of regionalized Coefficients of Conservatism (C values) for native plant species present in the Laurentian Mixed Forest and Eastern Broadleaf Forest Provinces. The project is currently underway.

Floristic Quality Assessment for Prairie Parkland and Tallgrass Aspen Parklands Provinces (2018-2019)

Project lead overseeing the development of regionalized Coefficients of Conservatism (C-values) for native plant species present in the Prairie Parkland and Tallgrass Aspen Parklands Provinces. Established and managed a panel of experts, contributed to the assignment of C-values and prepared the final project document. This effort was done in partnership with the Minnesota Department of Natural Resources.

Floristic Quality Assessment for Minnesota Wetlands (2005-2007)

Project Manager overseeing the development of Coefficients of Conservatism (C-values) for wetland flora in Minnesota. Established and managed a panel of experts, contributed to the assignment of C-values and prepared the final project document. This effort was done in partnership with the Minnesota Department of Natural Resources through funding provided by the federal government and administered by the MN Pollution Control Agency.

Eric Ogdahl

Field Ecologist



EXPERTISE

- Plant Identification
- Vegetation Monitoring
- Wetland Delineations
- Native Plant Community Classification/Mapping
- Restoration Ecology

EDUCATION

MS Natural Resources Science and Management

University of Minnesota – Twin Cities

Thesis: Assessing the use of shrub-willows for living snow fences in Minnesota, USA

BS Ecology, Evolution, and Behavior

University of Minnesota – Twin Cities

PUBLICATIONS

Ogdahl, E.J., D.S. Zamora, G. Johnson, G. Wyatt. 2018. Comparison of woody species for use in living snow fences in the Midwestern United States. *Journal of Soil and Water Conservation*.

Ogdahl, E.J., D.S. Zamora, G. Johnson, G. Wyatt, D. Current, and D. Gullickson. 2016. Establishment and potential snow storage capacity of willow (*Salix* spp.) living snow fences in south-central Minnesota, USA. *Agroforestry Systems*.

Ogdahl, E.J. 2015. Financial assistance for living snow fences in Minnesota: programs to save lives, money, and time. *Inside Agroforestry*, USDA National Agroforestry Center: Volume 24, Issue 1.

Borer, E.T., E.M. Lind, **E.J. Ogdahl**, E.W. Seabloom, D. Tilman, R.A. Montgomery, and L.L. Kinkel. 2015. Food-web composition and plant diversity control foliar nutrient content and stoichiometry. *Journal of Ecology* 103:1432-1441.

Eric has been a field ecologist at MNR since the spring of 2020, where he began as a field assistant. During the 2021 field season, he proved his abilities and ecological knowledge and now serves as a field lead for vegetation assessment and monitoring projects, habitat management plans, native plant community mapping, and wetland delineations. Eric's background in ecological restoration and management has been utilized to develop several habitat management plans for sites across Minnesota and Wisconsin.

HABITAT MANAGEMENT PLANS

All habitat management plan projects include conducting a comprehensive and site assessment to document current conditions, classify and map native plant communities, conduct a vegetation inventory, and identify and map management issues and concerns.

Minnesota Land Trust – Grand Marais (2021) Cook County, Minnesota

Served as field lead assessing 40 acre site

Minnesota Land Trust – Sand Creek (2021) Pine County, Minnesota

Served as field lead assessing 420 acre site

Minnesota Land Trust – Roosevelt Lake (2021) Cass County, Minnesota

Served as field lead assessing 20 acre site

Minnesota Land Trust – Twin Lake (2020) Ottertail County, Minnesota

Served as field lead assessing 60 acre site.

Minnesota Land Trust – Knife River (2020) Lake County, Minnesota

Co-led field surveys to assess 300 acre site.

Alberta Clipper Wetland Restoration and Invasive Species Management Plan (2021)

Served as technical reviewer for wetland restoration and invasive species management plan for pipeline corridor in Douglas County, Wisconsin. Additionally developed site-specific seed specifications for wetland restoration.

VEGETATION MONITORING AND ASSESSMENT PROJECTS

MN DNR Prairie Monitoring (2020-2022) Western MN

Served as botanist responsible for the implementation of vegetation monitoring of high-quality remnant prairie sites throughout the Prairie Parklands and Tallgrass Aspen Parkland ecological provinces in Minnesota. Vegetation sampling is conducted along permanent 50-m transects in which plant inventories and abundance (visual estimation of cover using Braun/Blanquet scale) data are collected within plots along each transect. Additionally, he assists with sampling permanent relevé plots in remnant prairie. In both sampling methods, all plant species are identified, and data is collected using the Survey123 app.

Line 3 Peatland Monitoring (2021-2022) Northern Minnesota

Botanical field lead conducting sampling in relevé plots within select peatland areas along the Line 3 pipeline throughout northern Minnesota. Relevé plots were sampled at randomly assigned locations that were outside of the active pipeline construction area, and were placed at varying distances from the pipeline construction area. Plots are intended to be resampled in future years to study potential impacts on the quality of the peatland sites in relation to their proximity to the pipeline construction area.

BWSR Wetland Sampling (2020-2021) throughout Minnesota

Lead field botanist conducting vegetation monitoring within 53 compensatory mitigation wetland sites across Minnesota, including 13 in the prairie region with restored wet prairie and wet meadow communities. Surveys were conducted throughout the growing season and included timed-meander surveys following BWSR's modified FQA protocol, community mapping, and specimen collection. Data was collected using Field Maps. Voucher specimens were collected, pressed, and submitted to BWSR staff for confirmation of identification. All unknown plants encountered during surveys were identified in the field using dichotomous keys or were collected and later identified.

MN DNR Klondike Relevés (2021) Kittson and Roseau counties, Minnesota

Served as botanist co-leading project contracted by the DNR to resample four relevé plots, originally surveyed over 25 years ago, as well as two new plots, in State Wildlife Management Areas within the Aspen Parklands ecological subsection. Relevé plots were sampled following methods described in *the Handbook for Collection Vegetation Plot Data in Minnesota: the Relevé Method, 2nd Edition*. These data were then used to rank the condition of the native plant communities in which the relevés were sampled to inform the management of these communities.

Two Creeks Solar Project Vegetation Assessment and Management Recommendations (2021) Manitowac County, Wisconsin

Co-led vegetation assessments on recently established plantings of native vegetation, including pollinator plantings, on 780 acres across 6 solar project sites. Collected comprehensive species lists for each site, and mapped noxious weeds and areas requiring vegetation maintenance. These data were then used to develop recommendations for vegetation management across the solar sites.

NATIVE PLANT COMMUNITY MAPPING/CLASSIFICATION PROJECTS

Leech Lake Band of Ojibwe Native Plant Community Mapping (2021-2022) Cass and Itasca Counties, Minnesota

Co-led effort to classify native plant communities on over 10,000 acres within the Tribal lands of the LLBO to guide forest management. Following the *Field Guide to Native Plant Communities of Minnesota: The Laurentian Mixed Forest Province*, mapped 20 different NPCs, spanning eight NPC systems, and recorded one incidental detection of the state-listed *Botrychium lanceolatum*.

USFS Superior National Forest (2020) Northern Minnesota

Ecologist assisting with mapping native plant communities on over 4,000 acres of federal land for the US Forest Service Superior National Forest.

RARE PLANT SURVEY PROJECTS

Standard methods for rare plant surveys always entail collecting a comprehensive plant species list, collecting voucher specimens where appropriate and submitting specimens to the Bell Museum of Natural History (MIN), as well as submitting spatial data for any rare plant detections to the DNR for inclusion in the NHIS database.

USFS Superior National Forest Rare Plant Surveys (2020)

Field botanist responsible for conducting surveys for state-listed plant species throughout the Superior National Forest.

USFS Chippewa National Forest Rare Plant Surveys (2020)

Field botanist responsible for conducting surveys for state-listed plant species throughout the Chippewa National Forest. Field efforts included stand evaluations and invasive species documentation within the surveyed stands.

MN DNR Lake Vermilion State Park Rare Plant Surveys (2020) St. Louis County, Minnesota

Assisted with rare plant survey across 410 acres at Lake Vermilion-Soudan Underground Mine State Park for proposed recreational development. Surveys resulted in the documentation of 289 species of vascular plants, but no rare species were observed.

WETLAND DELINEATION PROJECTS

Wetland delineation surveys always follow standard delineation methods as defined by the 1987 U.S. Army Corps of Engineers (USACE) Manual and subsequent Regional Supplement. MNR had developed an internal wetland delineation data collection application which is used by MNR staff for all wetland delineation projects.

Midwest Carbon Exchange (2021-2022) North Dakota, South Dakota, and Nebraska

Field lead for surveys to delineate wetlands according to Army Corps of Engineers' guidelines for this proposed linear carbon capture project covering multiple routes in three states. Waterbodies were also mapped and documented in conjunction with the wetland delineations. Additional data collected included land use cover and potential habitat for threatened and endangered species across the proposed routes.