



US Army Corps
of Engineers
St Paul District

SPONSOR: Enbridge Energy
Company, Inc

Public Notice

ISSUED: June 20, 2014

EXPIRES: July 21, 2014

REFER TO: 2014-01566-WMS

SECTION: 404 - Clean Water Act

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1. WETLAND COMPENSATORY MITIGATION BANK PROPOSAL: Bluff Creek Wetland Bank
 2. SPECIFIC INFORMATION.

SPONSOR'S ADDRESS: Enbridge Energy Company, Inc.
1409 Hammond Avenue
Superior, Wisconsin 54880

SPONSOR'S AGENT Short Elliott Hendrickson Inc.
418 W Superior St., Suite 200
Duluth, Minnesota 55802

PROJECT LOCATION: The project site is located in Sections 18, 19 & 20, T. 48N., R. 13W., Douglas County, Wisconsin. The approximate UTM coordinates are Latitude 46.62938, Longitude 92.04297.

BANK SERVICE AREA: The proposed bank service area is the Lake Superior Geographic Management Unit and Douglas County, WI.

DESCRIPTION OF PROJECT: The sponsor is proposing to develop the Bluff Creek Wetland Bank. The proposed bank site is approximately 490 acres in size, including upland buffer areas.

CURRENT LAND USE, INCLUDING ADJACENT PROPERTIES: Current land use at the proposed mitigation bank site is agriculture. Approximately 150 acres of the site are composed of hayfields dominated by non-native forage species and the remaining 340 acres is pasture land for cattle. The site is bounded by pasture across Valley Brook Road to the south, Enbridge pipeline right-of-way and adjacent Enbridge land that has been put under conservation easement for previous project-specific mitigation to the north, and undeveloped forested land and hayfields to the east and west. Enbridge pipeline right-of-way borders the site on the northeast. The previous landowners cleared woody vegetation from approximately 80 acres of the site and has been intensive grazing. Immediately to the north, the "northeast" and "northwest" pastures have not been cleared of woody vegetation, but do have areas of soil disturbance and erosion due to cattle activity. A lesser amount of grazing has also occurred within the area proposed for preservation, contributing to soil disturbance and erosion in a few locations on the Bluff Creek streambanks.

Bluff Creek flows from south to north through hayfields on the east side of the site and from east to west in the wooded pasture area. Bluff Creek eventually flows into Allouez Bay close to the Superior

Entry where the St. Louis River enters Lake Superior. Two unnamed tributaries to Bluff Creek also flow through the site.

MODIFICATIONS PROPOSED TO RESTORE, ESTABLISH, ENHANCE AND/OR PRESERVE WETLANDS ON THE BANK SITE: Activities on site would include a combination of restoration, enhancement, and preservation of hardwood swamp, floodplain forest, shrub-carr, and fresh (wet) meadow wetlands. Vegetation enhancement is proposed to take place in upland areas that currently have populations of non-native invasive plant species. Acreage of existing and proposed wetlands, by wetland classification, is shown in **Table 1** below. Ultimate wetland acreage is currently presented as a range of possible values because potentially restorable wetlands in the eastern hayfield area need additional hydraulic analysis in spring 2015. This analysis will determine the quantity and quality of subsurface drainage features, which will complete the detailed hydrology design for wetland restoration.

Table 1
Existing and Anticipated Wetlands by Type

Wetland Type¹	Acres
<i>Existing</i>	
Floodplain Forest	10.14
Hardwood Swamp	47.98
Fresh (Wet) Meadow	80.56
Shrub-Carr	185.15
Total	323.83
<i>Proposed Wetlands</i>	
Floodplain Forest	10.14
Hardwood Swamp	54 – 56
Fresh (Wet) Meadow	46.56
Shrub-Carr	231 – 238
Total	341 – 349
¹ Classification according to Eggers and Reed (2011) <i>Wetland Plants and Plant Communities of Minnesota and</i>	

Restoration & Enhancement Areas - Approximately 310 acres on the south side of the site (adjacent to Valley Brook Road) are proposed for various wetland restoration, wetland enhancement, and upland buffer enhancement activities. Existing wetland covers approximately 150 acres of the 310 acres. Vegetation in the existing restoration/enhancement area is disturbed, where previous owners of the site cleared large areas of woody vegetation. In addition, herbaceous vegetation was grazed and/or seeded to non-native forage species. Existing forested drainages and shrub-carr wetland pastures are less disturbed, but do contain invasive shrubs including common buckthorn (*Rhamnus cathartica*) and showy honeysuckle (*Lonicera x bella*), as well as areas of erosion and soil disturbance (e.g., churning, compaction) due to cattle grazing. Compensation activities for the restoration/enhancement area are discussed by habitat type in the sections below.

Shrub-Carr & Hardwood Swamp Enhancement - Cessation of grazing will reduce erosion and further degradation of existing shrub-carr and hardwood swamp habitat in pastures. Enhancement activities will consist of treatment of invasive plant species. Enhancement of existing shrub-carr communities is proposed to be credited at a 0.5:1 ratio.

Fresh (Wet) Meadow Restoration & Enhancement - Wetland restoration is proposed for areas that have hydrology altered by agricultural activity (i.e., clearing and grubbing of woody vegetation, planting of forage vegetation for hay production, cattle grazing). Shallow man-made ditches exist in the hayfields, and evidence of sub-surface drainage has been observed on site. The soil in the pasture area has been particularly disturbed by cattle grazing, which includes evidence of loss of topsoil, churning, and compaction compared to other areas on site. This compaction, churning, and exposure of topsoil in conjunction with grazed vegetation may be contributing to more efficient evaporation and drainage of surface water above otherwise clayey loam soils that under normal circumstances would tend to hold surface moisture in place. The altered hydrology onsite will be restored by disabling any functional tile drainage, along with some minor grading to enhance hydrology retention. In heavily grazed, highly compacted areas, water-holding capacity of the soil should improve through cessation of grazing and re-establishment of native hydrophytic vegetation. Soil amendments using Biotic Earth™ (a soil building product containing organic material and mycorrhizae) are proposed in test plots to evaluate their ability to both improve hydrophyte establishment in degraded pastures and provide a medium for soil redevelopment in churned and exposed topsoil. Diverse native vegetation will be restored by conducting herbicide treatments for invasive plant species and seeding of native wetland vegetation. Wetland restoration is proposed to be credited at a 1:1 ratio. Enhancement activity in highly degraded areas of pasture that still meet wetland characteristics will be similar to restoration methods described above, including cessation of grazing, seeding of native hydrophytic species, and soil amendment test plots. Enhancement is proposed to be credited at two separate ratios: a 1:1 ratio for the most highly disturbed areas, and a 0.5:1 ratio for areas not previously cleared of woody vegetation.

Forested Floodplain Enhancement - Enhancement activity in currently forested drainages will consist of invasive species management and planting of native hydrophytic shrubs where appropriate. These enhancement activities are proposed to be credited at a 0.5:1 ratio.

Upland Buffer Enhancement - Upland enhancement is proposed to take place through herbicide treatment of invasive species and seeding of native species. Tree and shrub planting is proposed in clusters along steeper slopes in the hayfields. Upland enhancement is proposed to be credited at a 0.25:1 ratio.

Preservation - Prior to the applicant entering into a purchase agreement for restoration and conservation of this property, the entire site was privately-held and utilized for agrarian and extractive purposes, including cattle grazing, haying, and select harvesting of timber and clearing of woody species to increase pasturing. Cattle grazing, particularly in pastures that were previously vegetated with woody species, has clearly disturbed the natural function of the wetlands onsite. Other areas of existing forested woodland and shrubby habitats, including both wetlands and uplands, also have clear evidence of disturbance by cattle grazing. Forested areas along Bluff Creek have been trampled causing bank instability and erosion. If the site were to remain in use by the previous owners, it is expected that this disturbance would continue. Wetlands, uplands, and streams would continue to be impacted by grazing, additional land clearing and select harvesting to increase pasturing and hayfields, streambank instability and erosion, and overall degradation of stream water quality with drainage direct to Lake Superior. For these reasons, there is a demonstrable threat of logging, clearing, haying, and continued cattle grazing to the 180 acres of relatively-undisturbed area of forested wetland and upland within the Bluff Creek site. Under the applicant's ownership, these areas are proposed for preservation. Conservation of this area contributes to the ecological value of the site as a whole, between previously fragmented habitat on the south side restoration/enhancement area adjacent to Valley Brook Road, and habitat owned by the

applicant for preservation in previous compensation site plans. The 174 acres of wetland in this area proposed to be preserved at a credit ratio of 0.125:1. Approximately six (6) acres of upland are present within the preservation area. These uplands are present both along steep slopes near Bluff Creek and in small upland “islands.” Preservation of upland habitat is proposed to be credited at a 0.1:1 ratio.

A summary of estimated credits by compensation technique is provided in **Table 2** below.

Table 2
Estimated Credits by Compensation
Technique

Compensation Technique	Acres	Credit Ratio	Estimated Credits
Wetland Restoration	18.00 - 27.00	1:1	18.00 - 27.00
Wetland Enhancement ⁽¹⁾ (Grazed with woody vegetation remaining)	85.80	0.5:1	42.90
Wetland Enhancement ⁽¹⁾ (Grazed and woody vegetation removed)	64.03	1:1	64.03
Wetland Preservation	174.00	0.125:1	21.75
Upland Buffer Enhancement	133.17 - 142.17	0.25:1	33.29 - 35.54
Upland Buffer Preservation	6.00	0.1:1	0.60
Total	490.00	-	182.82 - 189.57

⁽¹⁾ Enhancement is proposed to be credited at two separate ratios, based on the existing level of disturbance. Areas grazed and cleared of woody vegetation are proposed to be credited at 1:1, and areas disturbed but not cleared are proposed to be credited at 0.5:1.

A summary of estimated credits by wetland classification is provided in **Table 3** below.

Table 3
Estimated Credits by Wetland Classification

Wetland Classification	Compensation Technique	Acres	Credit Ratio	Estimated Credits
Floodplain Forest	Wetland Enhancement	10.14	0.5:1	5.07
Hardwood Swamp	Wetland Enhancement	6.41	0.5:1	3.21
	Wetland Preservation	40.57	0.125:1	5.07
Fresh (Wet) Meadow	Wetland Restoration	18.00 - 27.00	1:1	18.00 - 27.00
	Wetland Enhancement	26.50	1:1	26.50
	Wetland Preservation	6.82	0.125:1	0.85
Shrub-Carr	Wetland Enhancement	37.53	1:1	37.53
	Wetland Enhancement	69.25	0.5:1	34.63
	Wetland Preservation	126.61	0.125:1	15.83
Upland Buffer	Upland Buffer Preservation	6.00	0.1:1	0.6
Upland Buffer	Upland Buffer Enhancement	133.17 - 142.17	0.25:1	33.29 - 35.54
Total		490.00	-	182.82-189.57

SURROUNDING LAND USE: The surrounding land use is primarily agricultural.

COORDINATION WITH RESOURCE AGENCIES: This project has been coordinated with the following members of the Interagency Review Team (IRT) and other resource agencies: Wisconsin Department of Natural Resources, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S. Department of Agriculture.

Operations - Regulatory (2014-01566-WMS)

SUBJECT: Bluff Creek Wetland Bank

3. REPLIES/COMMENTS.

Interested parties are invited to submit to this office written facts, arguments, or objections within 30 days of the date of this notice. These statements should bear upon the suitability of the location and the adequacy of the project and should, if appropriate, suggest any changes believed to be desirable. Comments received may be forwarded to the applicant.

Replies may be addressed to Regulatory Branch, St. Paul District, Corps of Engineers, Hayward Field Office, 15954 Rivers Edge Drive, Suite 240, Hayward, WI 54843.

Or, IF YOU HAVE QUESTIONS ABOUT THE PROJECT, call Bill Sande at the Haward office of the Corps, telephone number (715) 934-2170.

To receive Public Notices by e-mail, go to: http://mvp-extstp.mvp.usace.army.mil/list_server/ and add your information in the New Registration Box.

4. FEDERALLY-LISTED THREATENED OR ENDANGERED WILDLIFE OR PLANTS OR THEIR CRITICAL HABITAT.

None were identified by the applicant or are known to exist in the permit area. However, Douglas County is within the known or historic range of the following Federally-listed threatened (T), endangered (E) and proposed as endangered (PE) species:

<u>Species</u>	<u>Habitat</u>
Canada Lynx (T)	While no resident populations are known from Wisconsin, the species occasionally occurs in northern forested areas, and counties listed are those with the highest likelihood of occurrence.
Kirtland's Warbler (E)	Potential breeding in young jack pine stands (5 to 25 years old).
Piping Plover (E)	Sandy beaches; bare alluvial and dredge spoil Islands.
Fassett's Locoweed (T)	Open sandy lakeshores
Northern Long-Eared Bat (PE)	Hibernates in caves and mines – swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.

Operations - Regulatory (2014-01566-WMS)

SUBJECT: Bluff Creek Wetland Bank

This notice is being coordinated with the U.S. Fish and Wildlife Service. Any comments it may have concerning Federally-listed threatened or endangered wildlife or plants or their critical habitat will be considered in our final assessment of the described work.

5. JURISDICTION.

This application is being reviewed in accordance with the practices for documenting Corps jurisdiction under Sections 9 & 10 of the Rivers and Harbor Act of 1899 and Section 404 of the Clean Water Act identified in Regulatory Guidance Letter 07-01. We have made a *preliminary determination* that any aquatic resources that would be impacted by the proposed project are regulated by the Corps of Engineers under Section 404 of the Clean Water Act. Our jurisdictional review and final jurisdictional determination could result in modifications to the scope of the project's regulated waterbody/wetland impacts. Because this project is a mitigation bank, any required compensatory mitigation would be accounted for in the credit yield calculations. Any regulated discharges associated with implementation of a final approved bank plan could likely be authorized by regional general permit if the bank plan is approved before any regulated discharge occurs. Any *approved jurisdictional determination* needed will be made prior to reaching a decision, and will be posted on the St. Paul District web page at <http://www.mvp.usace.army.mil/Missions/Regulatory.aspx>.

6. HISTORICAL/ARCHAEOLOGICAL.

The Corps will review information on known cultural resources and/or historic properties within and adjacent to the project area. The Corps will also consider the potential effects of the project on any properties that have yet to be identified. The results of this review and the Corps' determination of effect will be coordinated with the State Historic Preservation Officer independent of this public notice. Any adverse effects on historic properties will be resolved prior to the Corps authorization, or approval, of the work in connection with this project.

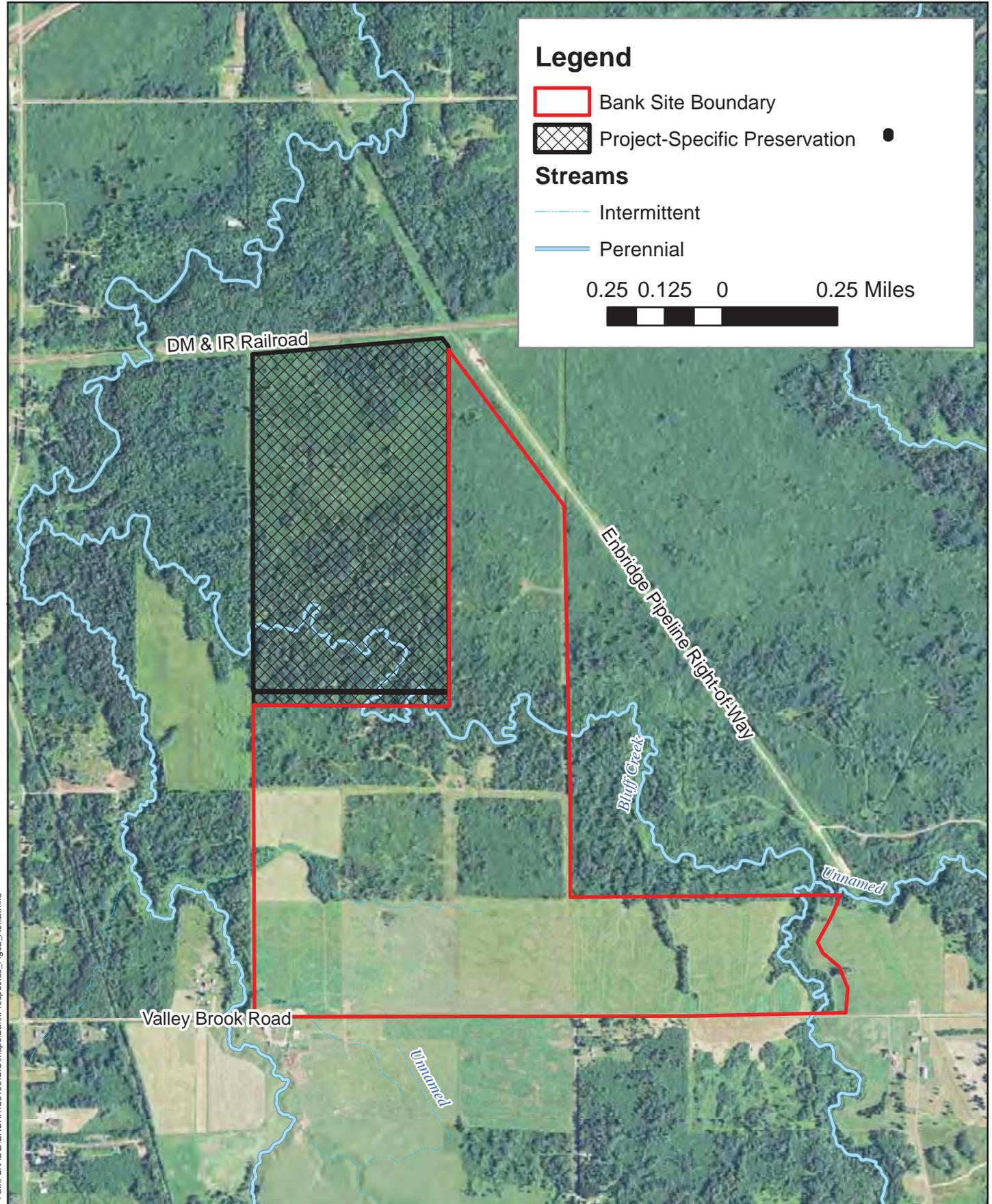
The latest versions of the National Register of Historic Places and the Wisconsin Historic Preservation Database have been consulted and no listed properties (known to be eligible for inclusion, or included in the Register) are located within, or adjacent to the project area.

7. PUBLIC HEARING REQUESTS.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, in detail, the reasons for holding a public hearing. A request may be denied if substantive reasons for holding a hearing are not provided or if there is otherwise no valid interest to be served.

Jeff Olson,
NE Section Chief

Enclosure(s)



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 PHONE: (218) 279-3000
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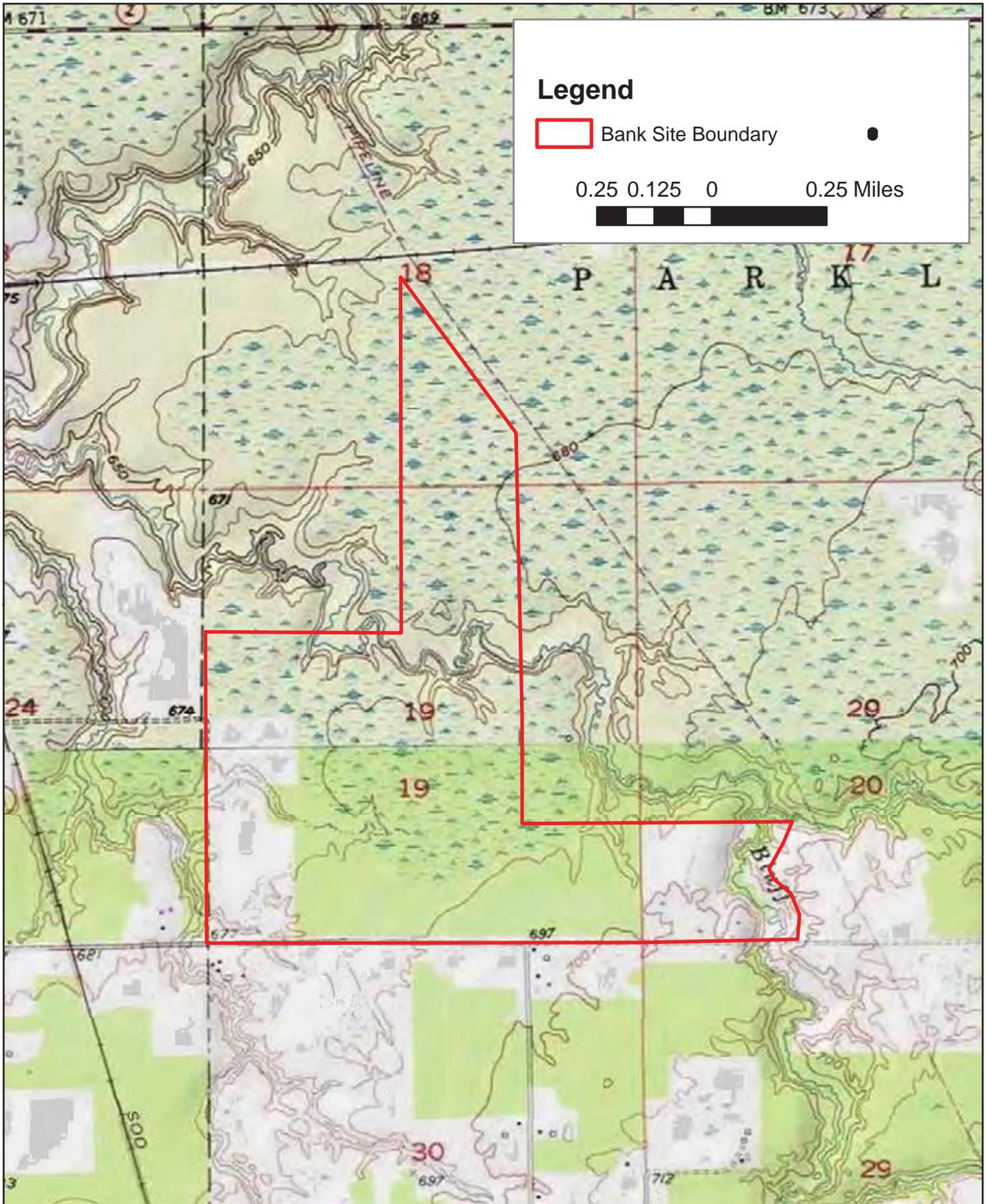
Project: ENBRI 125186
 Print Date: 3/11/2014

Map by: nwhite
 Projection: NAD 83, UTM 15N
 Source: NAIP, WDNR, SEH

2013 AERIAL PHOTOGRAPH
 BLUFF CREEK
 WETLAND MITIGATION BANK
 Douglas Co., Wisconsin

Figure
 2

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.



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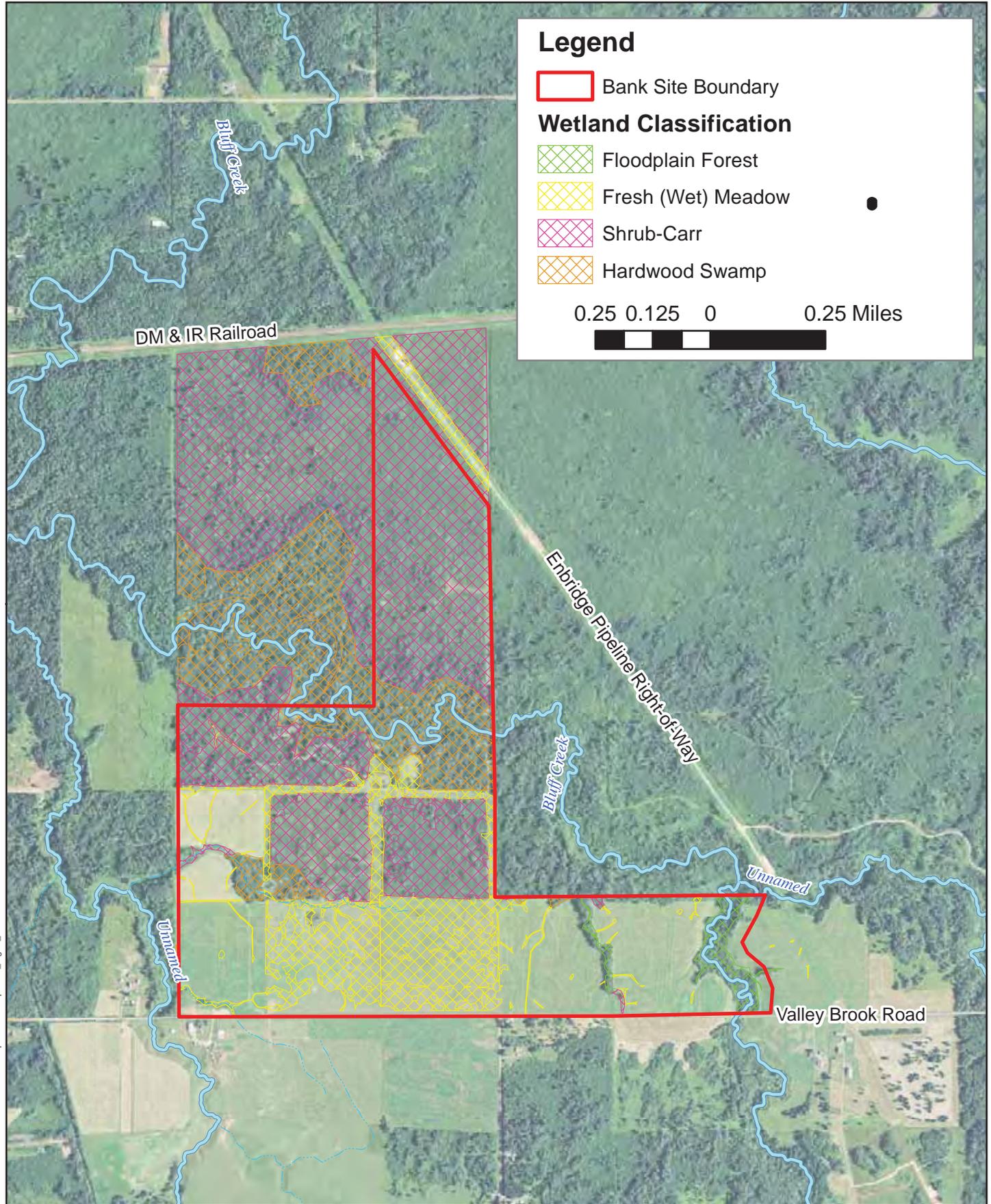
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TOPOGRAPHIC MAP
 BLUFF CREEK
 WETLAND MITIGATION BANK
 Douglas Co., Wisconsin

Figure
 4

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 Print Date: 3/11/2014
 Map by: nwhite
 Projection: NAD 83, UTM 15N
 Source: NAIP, WDNR, SEH

EXISTING WETLANDS
 BLUFF CREEK
 WETLAND MITIGATION BANK
 Douglas Co., Wisconsin

Figure
 5

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Legend

 Bank Site Boundary

Existing Wetland Classification

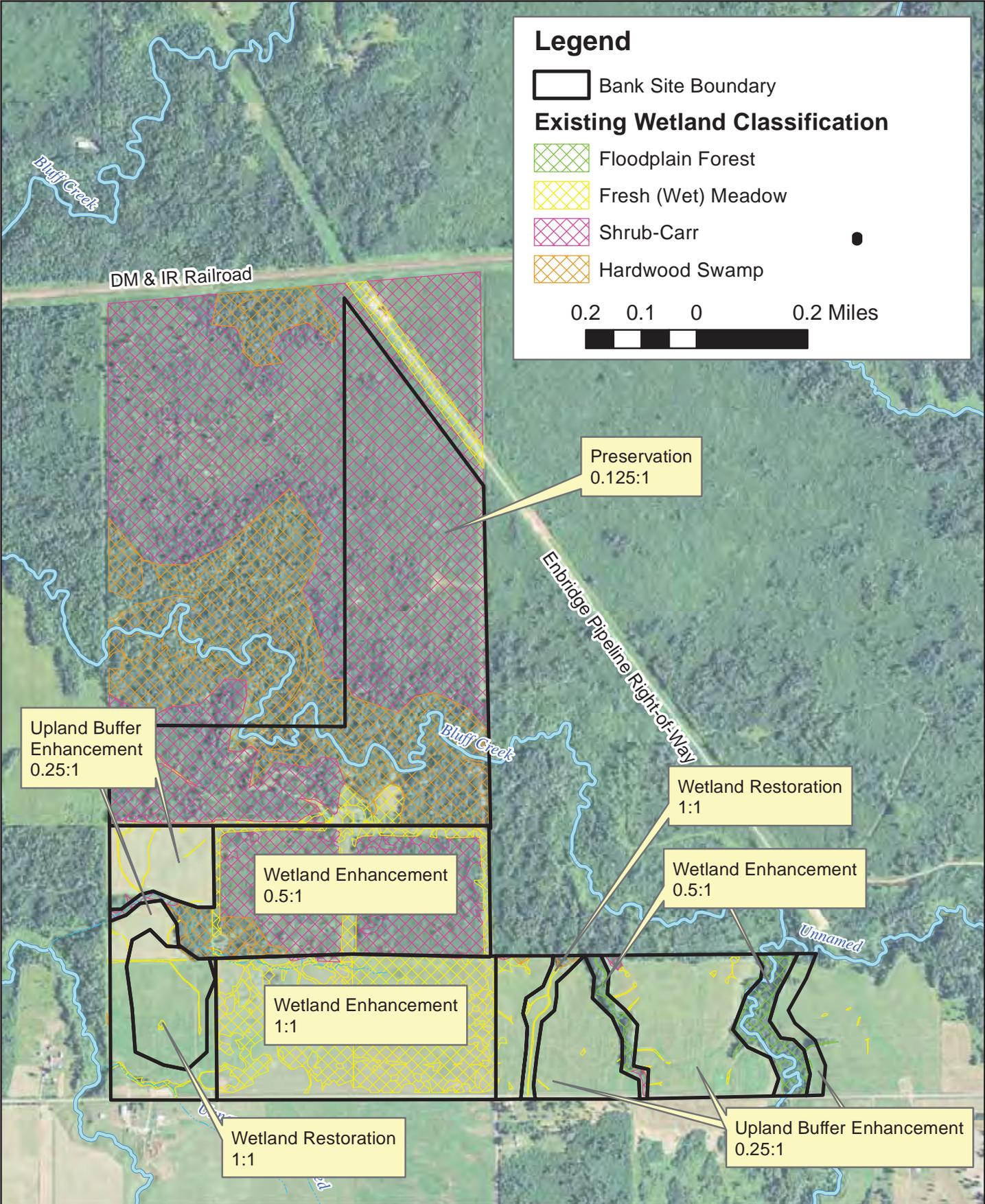
 Floodplain Forest

 Fresh (Wet) Meadow

 Shrub-Carr

 Hardwood Swamp

0.2 0.1 0 0.2 Miles

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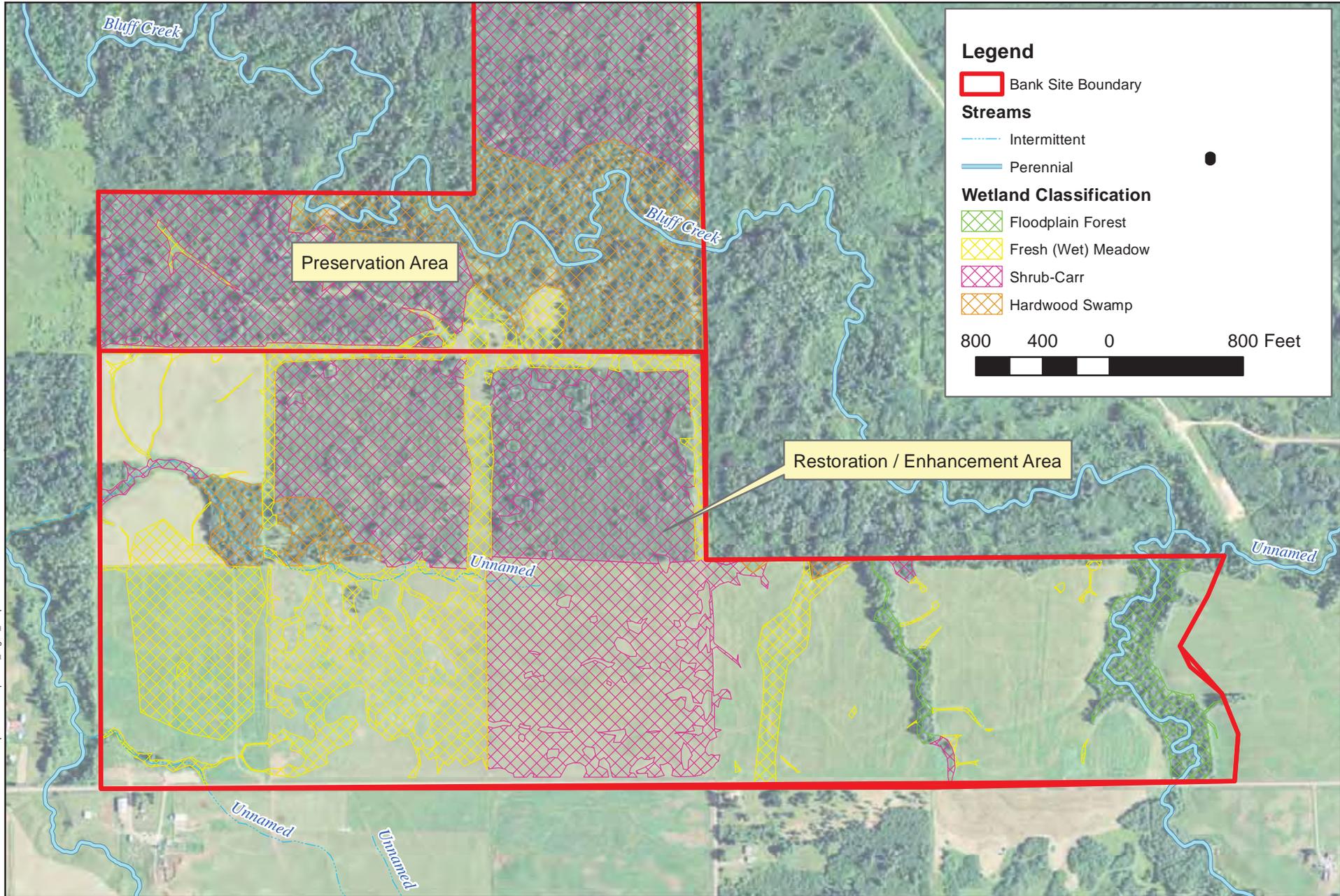
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Project: ENBRI 125186
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 Map by: nwhite
 Projection: NAD 83, UTM 15N
 Source: NAIP, WDNR, SEH

COMPENSATION TECHNIQUES
 BLUFF CREEK
 WETLAND MITIGATION BANK
 Douglas Co., Wisconsin

Figure
 6

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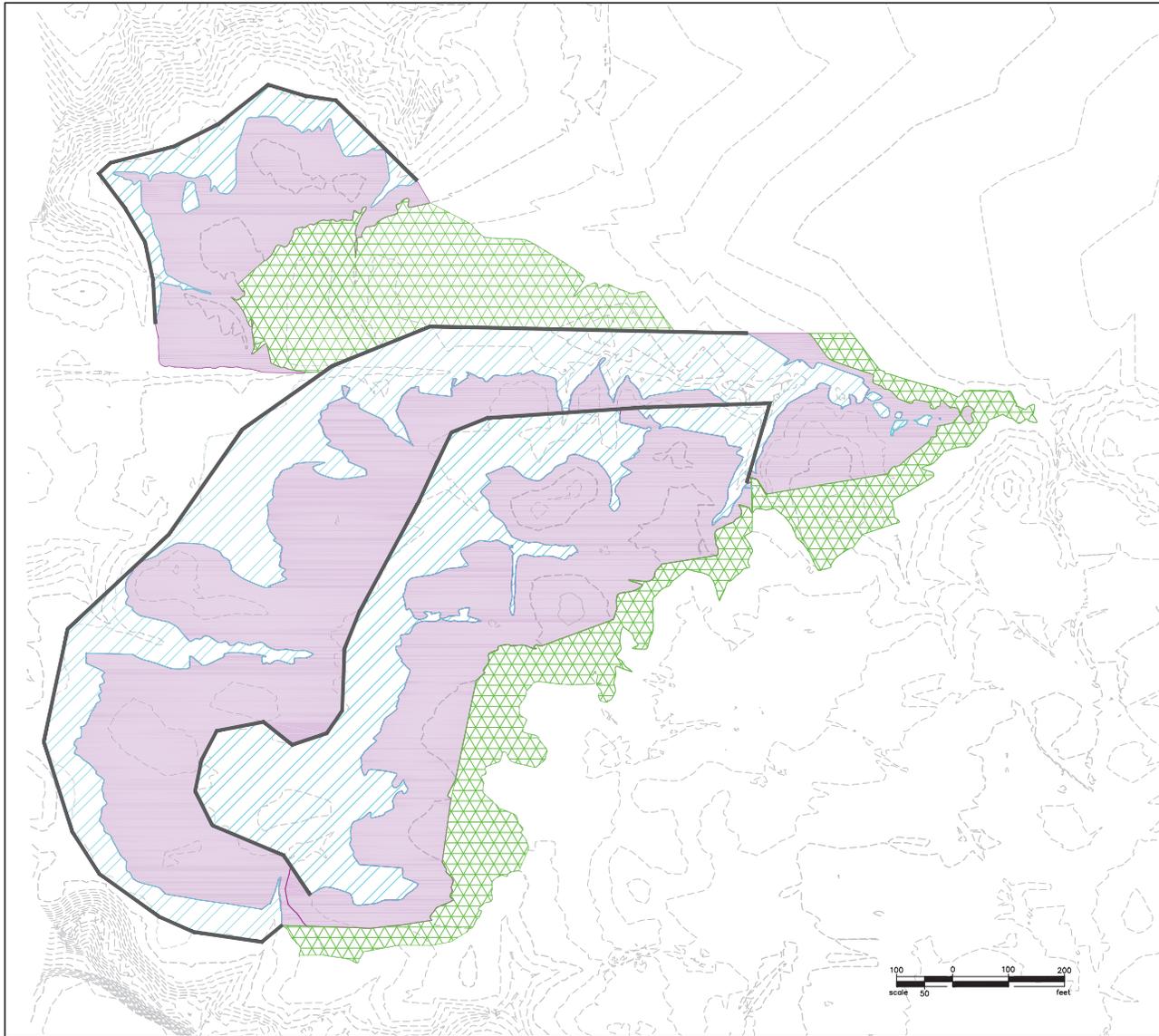
Project: ENBRI 125186
 Print Date: 4/3/2014

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PROPOSED WETLANDS: RESTORATION/ENHANCEMENT AREA
 BLUFF CREEK WETLAND MITIGATION BANK
 Douglas Co., Wisconsin

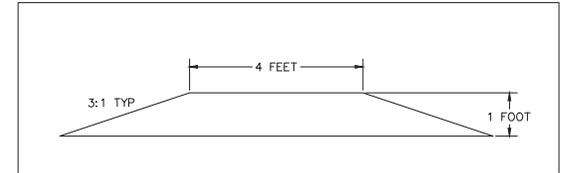
Figure
 7

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-  WATER DEPTH 0 TO 1 FEET
-  SATURATED SOIL
(EXPECTED TO MEET WETLAND HYDROLOGY CRITERIA)
-  SATURATED SOIL
(NOT EXPECTED TO MEET WETLAND HYDROLOGY CRITERIA)
-  PROPOSED BERM

ESTIMATED QUANTITIES	
0 TO 1 FEET	8.32 ACRES
SATURATED SOIL (MEET WETLAND CRITERIA)	14.60 ACRES
SATURATED SOIL (NOT MEET WETLAND CRITERIA)	6.15 ACRES
PROPOSED BERMS	5,200 LINEAR FEET



TYPICAL BERM SECTION

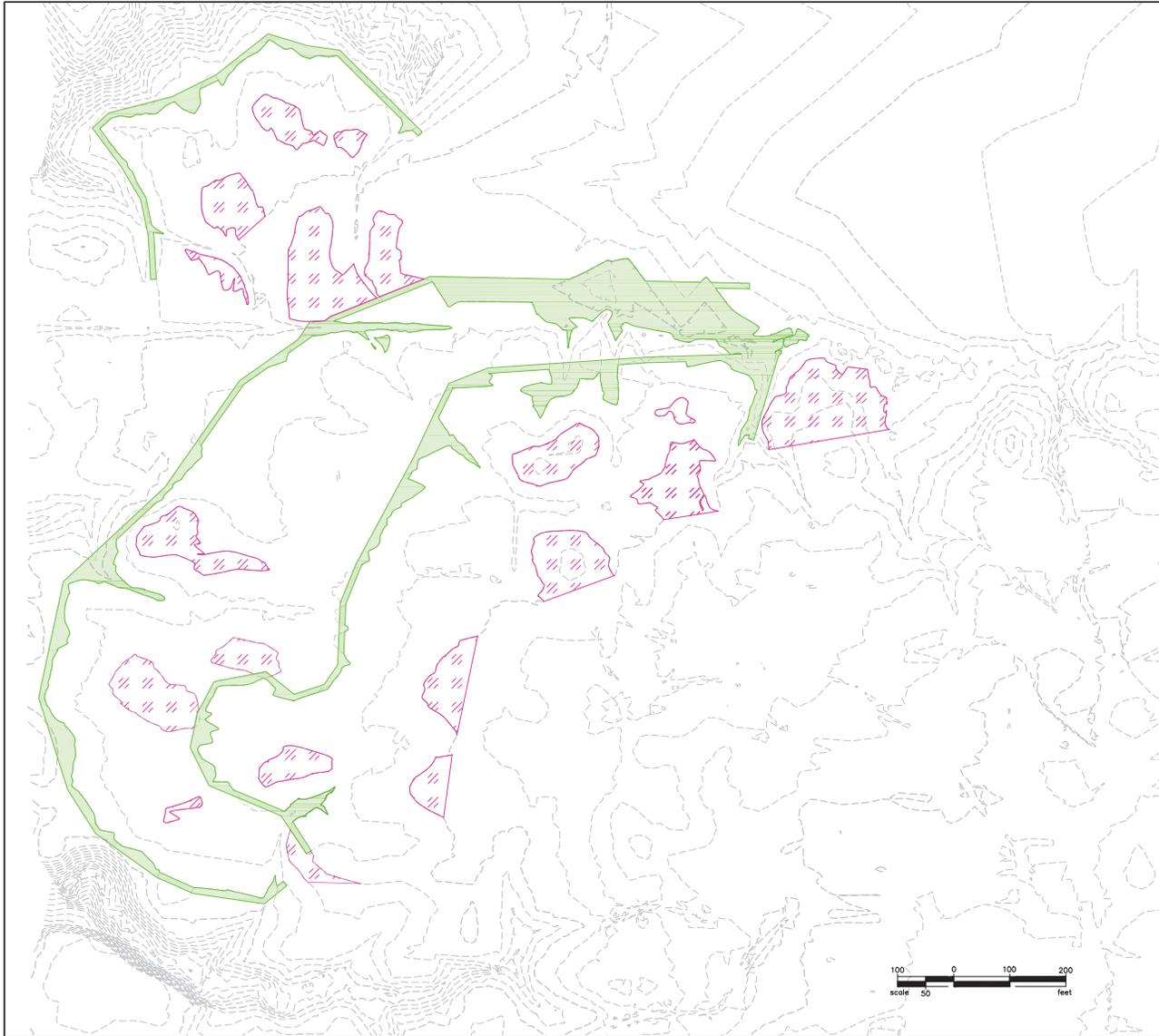


LOCATION MAP

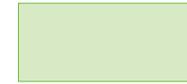


NOT FOR CONSTRUCTION

EXHIBIT A: PROPOSED HYDROLOGY
ENBRIDGE ENERGY BLUFF CREEK WETLAND MITIGATION SITE PLAN
DOUGLAS COUNTY, WISCONSIN



PROPOSED CUT



PROPOSED FILL

ESTIMATED QUANTITIES	
CUT	6,200 CU YD
FILL (INCLUDES 4 FT BERM)	5,000 CU YD



LOCATION MAP



NOT FOR CONSTRUCTION

ENBRIDGE ENERGY BLUFF CREEK WETLAND MITIGATION SITE PLAN
DOUGLAS COUNTY, WISCONSIN