DNROEEACOMMENTS@WI.GOV
Line 5 Comments
DNR (EA/7)
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Madison, WI 53707

July 8, 2020

The League of Women Voters of Wisconsin (LWVWI) thanks you for this opportunity to comment on the EIS and waterways permitting processes related to the proposed construction of 41 new miles of Line 5 through the Bad River Watershed. We have many concerns about the impacts the construction, maintenance, and operation of the pipeline would have on the environment, public safety, and emergency response capacity.

The region has been recognized for its particularly valuable resources, such as:

- The Bad River is one of only two rivers emptying into Lake Superior to host a self-sustaining lake sturgeon population (Lake Superior Lakewide Action and Management Plan 2013; https://www.natureconservancy.ca/assets/documents/on/lake-superior/Lake-Superior-Biodiversity-Conservation-Assessment-Vol2-Regional-Unit-Summaries-Final-Sep2015.pdf).

- The headwater streams and wetlands of the Bad River watershed are critical to cold-water fisheries, climate resilience, and downstream flow regimes (Lake Superior Lakewide Action and Management Plan 2013).

- Lake Superior was designated as a National Natural Landmark in 1973 and the Kakagon Sloughs, otherwise known as the "Everglades of the North", were designated as a Ramsar Wetland of International Importance in 2012. All of the streams crossed by the proposed pipeline eventually flow into these treasured resources.

- Copper Falls State Park, where the Bad River and Tyler Forks merge, is located just downstream of the proposed pipeline.

- Many streams and rivers have been designated as Outstanding or Exceptional Resource Waters.

- Numerous artesian wells bubble up throughout the region, supplying drinking water for residents and visitors alike.

- Apostle Islands National Lakeshore is located just offshore.

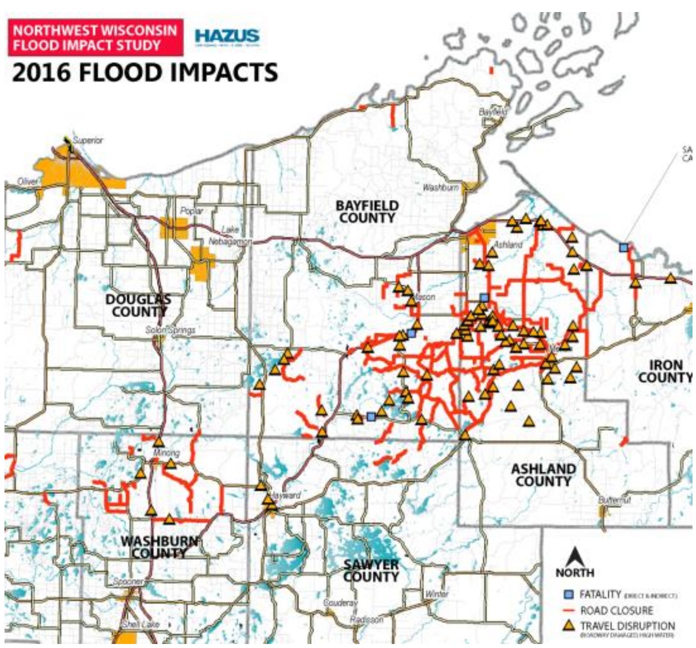
- Three state-recognized Important Bird Areas lie downstream of the proposed pipeline.

State and federal agencies, tribes, non-profit organizations, academia, and local citizens have collaborated for decades to restore wetlands, control invasive species, and improve fish passage in the Bad River Watershed. Townships, Tribal governments, and counties have recognized the importance of protecting ground and surface waters in their comprehensive plans. Construction of a pipeline along the route proposed would be counter to all the time, money, and effort dedicated to protecting this Watershed.

This document is organized into sections on ravines, wetlands and stream crossings, and habitat. Each section begins with a short summary of relevant research, followed by a list of concerns we would like to see addressed in the EIS and taken into consideration in the permitting process, and ending with the literature cited. Severe storms have wreaked havoc on our region in recent years and are expected to become more frequent. Because the threat of such storms impacts all of the other sections in this document, we will start by summarizing the predictions of extreme weather events. We will close with a summary of Enbridge's history of pipeline damage and spills.

Increase in Extreme Weather Events

The Lake Superior basin experienced extremely high rainfall events in 2012, 2016, and 2018. The 2016 storm brought between 10 and 16 inches of rain to Ashland and Iron Counties in exactly the area of the proposed pipeline construction. The storm caused widespread flooding, infrastructure damage, loss of lives, and landscape changes. Some of the damage is still not repaired.



Northwest Wisconsin Flood Impact Study, HAZUS-MH Level 2 Analysis, Nov 2018, page 4
https://nwrpc.com/DocumentCenter/View/1494/Northwest-Wisconsin-Flood-Impact-Study?bidId=

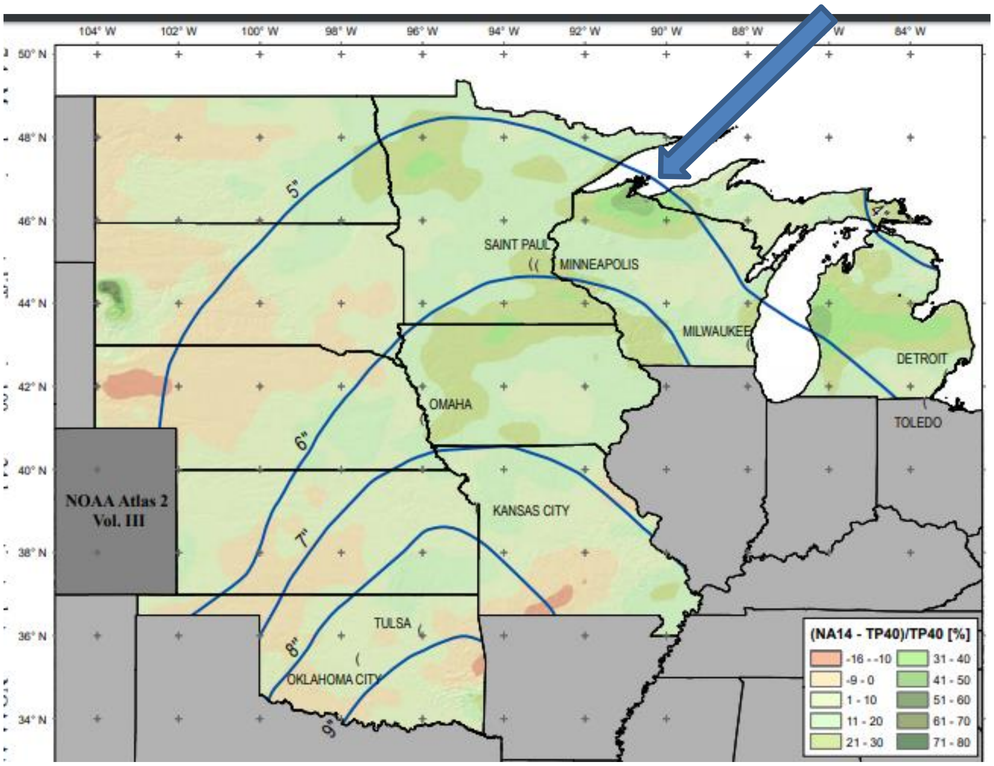
The map above indicates the damage that rendered roads impassable, not due to high water, which recedes rapidly this close to Lake Superior, but rather, due to culvert washouts, asphalt peeling away, and bridge instability. Repair and replacement of this damage took months and left some parts of the region inaccessible. Some areas will never be restored.


Vaughn Creek on Hwy 169, Iron County, July 12, 2016.


Railroad crossings over two small unnamed tributaries, Iron County, July 2016.


Billy Creek (left) and Trout Brook (right), Ashland County, July 2016.

Many studies have shown that severe rainfall events have increased since the 1950s and predict these increases will continue throughout this century (e.g., Perica et al. 2013, Wright et al. 2019, Lopez-Cantu et al. 2020). The figure below from Perica et al. (2013) shows the area in Wisconsin where the Line 5 expansion is proposed lies in the most extreme zone for predicted increases in rainfall.



Map showing percent differences in 100-year 24-hour estimates between NOAA Atlas 14 Volume 8 and TP40 (excluding Colorado). Superimposed on the map are isopluvials (blue lines) from TP40. Figure 7.4, page 39 in: https://www.nws.noaa.gov/oh/hdsc/PF_documents/Atlas14_Volume8.pdf
(Blue arrow added.)

Decision-makers should use climate models when planning future infrastructure, as the infrastructure typically has a lifetime of at least 50 years, which is much longer than most planning cycles (Stegall and Kunkle 2019). Yet the Federal Emergency Management Act (FEMA) regulations deny reimbursement for infrastructure that is re-engineered and upsized following a flood event, so many of the same culverts that failed in 2016 are just as vulnerable today as they were prior to the flood (FEMA policy 2009). Kevin Brewster, Restoration Manger for the Superior Rivers Watershed Association reports that "Under present FEMA guidelines, only original facility (culvert) replacement cost is eligible for disaster loss compensation. As a result, upgrading culverts to withstand historic and forecasted regional high stream flow events in an effort to stop expensive cycles of washout and repair is largely the burden of local communities". These local communities are not in a position to assume additional expenses for infrastructure, as 47% of Ashland County and 41% of Iron County residents live in poverty or are asset-limited (ALICE report 2018).

Enbridge engineers have evidently not yet found a way to remedy the exposed pipe on the existing line on the Bad River reservation. These photos, taken by a Bad River tribal member, shows Enbridge Line 5 pipeline uncovered by erosion on the reservation.

Citizens of Northern Wisconsin are rightly concerned about how a pipeline spill could possibly be contained if caused by or occurring during another extreme weather event. Damages incurred to public infrastructure in Ashland and Iron Counties exceeded $23 million according to the study commissioned by Northwest Regional Planning in 2018. Concrete culverts broke and were carried downstream. People were trapped between roads wash-outs. Emergency vehicles were unable to access people who were sick and some were rescued by helicopter. Neighbors used ATVs to share water and food.

<u>Concerns the EIS and permits should address</u>
In light of these studies and the recent extreme storm events experienced in the region, we believe it is important that the EIS and any permits issued include detailed plans for addressing extreme weather events and winter snow and ice conditions. Additionally, the following questions should be answered:

- How will this pipeline design stand up to increased gullying and erosion caused by future storms?
- When pipe is laid bare by our next extreme precipitation event, how will the applicant deal with the problem?
- How could Enbridge possibly stop an oil discharge from this pipeline if the rupture is caused by the next raging flood?

- How has Enbridge updated its design to accommodate anticipated extreme weather and flooding, especially where the pipe is proposed to be installed in steep ravines on a landscape prone to erosion, gullying, and slumps?

Literature Cited

ALICE (Asset Limited, Income Constrained, Employed). 2018. ALICE: A study of financial hardship in Wisconsin. The United Way ALICE Project. https://www.unitedwaymc.org/wp-content/uploads/2018/10/ALICE-Report-2018.pdf

FEMA policy publication. 2009. Repair vs. replacement of a facility under 44 CFR §206.226(f) (The 50 Percent Rule). https://www.fema.gov/9500-series-policy-publications/95244-repair-vs-replacement-facility-under-44-cfr-ss206226f-50-rule See item 3 (b).

Lopez-Cantu, T. A., F. Prein, and C. Samaras. 2020. Uncertainties in future U.S. extreme precipitation from downscaled climate projections. Geophysical Research Letters 47:1-11. https://doi.org/10.1029/2019GL086797

Perica, S., D. Martin, S. Pavlovic, I. Roy, M. St. Laurent, C. Trypaluk, D. Unruh, M. Yetka, and G. Bonnin. 2013. NOAA Atlas14, Precipitation-Frequency Atlas of the United States. Volume 8 Version 2.0: Midwestern States (Colorado, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, Wisconsin). U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service. Silver Spring, Maryland.

Stegall, S.T., and K.E. Kunkle. 2019. Simulation of daily extreme precipitation over the United States in the CMIP5 30-Yr decadal prediction experiment. American Meteorological Society 58:875-886. https://journals.ametsoc.org/doi/pdf/10.1175/JAMC-D-18-0057.1

Wright, D.B., C.D. Bosma, and T. Lopez-Cantu. 2019. U.S. hydrologic design standards insufficient due to large increases in frequency of rainfall extremes. Geophysical Research Letters 46: 8144-8153. https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2019GL083235

Ravines

Summary of relevant research

In the last decade or less, extreme rain events and associated flooding have reshaped the landscape in Ashland and Iron Counties in the areas of the proposed Enbridge Line 5 reroute (Northwest Regional Planning Commission 2018, Fitzpatrick et al. 2017). Some of the potential vulnerabilities of the tributaries of the Bad River, and the larger Bad River Watershed in general, were identified prior to these floods, namely a complex and unstable hydrologic system, transitional soils, and excess sediment (Stable Solutions LLC and Community GIS, Inc. 2007, Bad River Watershed Association 2013, Fitzpatrick et al. 2017). A closer look at the potential hydrologic and erosion impacts of the construction route is warranted because the route runs mainly west to east across some of the steepest sections of the generally south to north running tributaries of the Marengo River.

Post-flood studies and observations have documented the importance of headwater wetland storage and its potential effect on reducing downstream erosion of ravines and small tributary channels

(Wisconsin Wetlands Association 2018). In ravines with perched ground water and a sandy soil layer, piping, or seepage/sapping occurs and ravines exhibit mass failing from the sides (Landmeyer and Wellborn 2013). Infiltration can supercharge erosion, especially when trees are removed, and can result in bluff failures and mass wasting (Fitzpatrick, pers. comm., Gafvert, pers. comm.). Sometimes a "nick point" develops in a ravine, with erosion working its way upstream. This geomorphic process can occur downstream of an assessment area and could affect the reach in which the pipe is located. The assessment area needs to be extended downstream to look for potential nick points (Fitzpatrick, pers. comm.).

Day et al. (2017) demonstrate how changes in hydrology can affect the rate at which ravines enlarge through head cut propagation, incision, and channel widening. They note differences in the way ravines respond to surface water runoff compared to older and larger channels. The way the ravines along the proposed Line 5 construction route may enlarge due to changes in hydrology is a new topic for investigation.

Gully erosion may be accelerated where a pipeline easement bisects a swale and concentrates runoff from what was multiple small watersheds. Gullies form, as can be observed in the Denomie Creek area on the Bad River Reservation where the pipeline crosses tributaries to the Creek. The potential for similar effects exists throughout the proposed Line 5 construction route in headwater areas of transitional soils and steep slopes.

The red clay soils typical along portions of the proposed pipeline construction route are characterized as highly erodible with low permeability and are susceptible to extensive mass wasting along waterways such as streams and rivers of all sizes including intermittent drainages (Verry and Kolka 2003, Stable Solutions LLC and Community GIS Inc. 2007).

Landmeyer's and Wellborn's (2013) work on gullies with an amphitheater shape should also be taken into consideration in assessing the ravines along the proposed pipeline construction route. Groundwater seepage may account for head cutting and erosion.

A FEMA-funded study is scheduled to begin in 2020 that will improve the understanding of how the Marengo River Watershed behaves during storm events (https://www.wiscontext.org/when-big-storms-inundate-wisconsin-how-could-wetlands-slow-flow). Among the goals of the study are to conduct flood erosion hazard (FEH) analyses, develop a gully/ravine slope stability index specific to the watershed, analyze changes in runoff rates and describe the ramifications of concentrating flow downstream in catchments with sensitive characteristics.

Concerns the EIS and permits should address

In light of these studies and recommendations, we believe it is important that the EIS and any permits issued address the following:

- Analyze the connectivity of wetlands, all tributaries (permanent, intermittent, and ephemeral), and larger rivers. LiDAR coverage for Ashland County is available from 2015 flights and data from flights conducted in 2020 are expected to be available by fall. Comparisons of the two sets of data should be used to assess current connectivity (vertically, laterally, longitudinally, and temporally) and changes in connectivity pre- and post-flood events.

- Assess every tributary and drainageway– permanent, intermittent, and ephemeral– far beyond the extent of the perceived impact of the pipeline right of way for nick points of erosion that have the potential to extend upstream and drain headwater and floodplain wetlands. Examine the easement elevations for possible blockage and concentration of runoff into steeper zones. Include existing land cover and projected changes in land cover due to pipeline installation and long-term maintenance. Explain how land cover changes will or will not affect runoff. Identify areas especially sensitive to headcutting, gully formation, and channel incision. Include geology, soil, topography (slope), and groundwater information.

- Conduct careful analyses of existing and potential bluff failures, mass wasting, erosion-induced wetland drainage, and floodplain disconnection.

- Map networks of ditches and drain tiles, including the network of ditches that are hydrologically connected to streams. Identify watersheds, at the scale of the individual ravine, with groundwater inputs and sandy soil layers and assess the potential for ravine instability.

- Identify areas where bluffs have failed and/or mass wasting has occurred or is likely to occur based on landscape characteristics (e.g., material of bluff); detail how construction and long-term maintenance of the pipeline will avoid exacerbating these devastating erosional consequences of land disturbance.

- Detail how spoils are to be stockpiled; the spoils should be sectioned out in layers and returned in the same order to avoid erosion and piping effects and to best support revegetation with native species. Monitoring after installation should include surveys for the occurrence of destabilizing effects.

- Describe the kind of bedding material to be used along the pipeline and how the fill in the easement will match the surrounding soils and geologic deposits.

- If a generic slope stability index is used, identify how the metrics included in the index are appropriate for the setting of the Marengo River tributaries and the transitional landforms, glacial deposits, and vegetation.

Literature Cited

Bad River Watershed Association. 2013. Marengo River Watershed Partnership Project Watershed Action Plan. Ashland, WI. Available at: www.badriverwatershed.org/index.php/action/watershed-action-program/marengo-river-watershed-partnership-project/watershed-action-plan

Day, S.S., K.B. Gran, and C. Peola. 2017. Impacts of changing hydrology on ravine growth: experimental results. Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2017-567

Gafvert, U., personal communication. Soil Scientist, retired. Natural Resources Conservation Service and National Park Service, Great Lakes Inventory and Monitoring Division.

Fitzpatrick, F.A., E.D. Dantoin, N. Tillison, K.M. Watson, R.J. Waschbusch, and J.D. Blount. 2017. Flood of July 2016 in Northern Wisconsin and the Bad River Reservation: U.S. Geological Survey Scientific Investigations Report 2017–5029. https://doi.org/10.3133/sir20175029

Fitzpatrick, F., personal communication. Research hydrologist, U. S. Geological Survey, Wisconsin Water Science Center.

Landmeyer, J.E., and J.B. Wellborn. 2013. Geomorphology and groundwater origin of amphitheater-shaped gullies at Fort Gordon, Georgia, 2010–2012: U.S. Geological Survey Open-File Report 2013–1230. http://pubs.usgs.gov/of/2013/1230/

Northwest Regional Planning Commission. 2018. Northwest Wisconsin flood impact study. HAZUS-HM Level 2 Analysis. Spooner, WI. https://nwrpc.com/DocumentCenter/View/1494/Northwest-Wisconsin-Flood-Impact-Study?bidId=

Stable Solutions LLC, and Community GIS, Inc., 2007. Marengo River watershed test case: Assessing the hydrologic conditions of the Marengo River watershed, Wisconsin. A Report of the Hydrologic Condition of the Marengo River Watershed. Prepared for the Wisconsin Lake Superior Basin Partner Team. http://clean-water.uwex.edu/pubs//pdf/marengotest.pdf

Verry, E.S., and R.K. Kolka. 2003. Importance of wetlands to streamflow generation. Pages 126-132 *in* First Interagency Conference on Research in the Watersheds. U.S. Department of Agriculture, Agricultural Research Station, Benson, Arizona.

Wisconsin Context (2019). https://www.wiscontext.org/when-big-storms-inundate-wisconsin-how-could-wetlands-slow-flow

Wisconsin Wetlands Association. 2018. Exploring the Relationship between Wetlands and Flood Hazards in the Lake Superior Basin.
https://wisconsinwetlands.org/wp-content/uploads/2018/06/WetlandsFloodHazards_WWA_web.pdf

Wisconsin Wetlands Association. 2020. 2019 Act 157 Flood risk reduction pilot project.
https://docs.legis.wisconsin.gov/2019/proposals/sb252
https://www.apg-wi.com/spooner_advocate/free/bill-backs-pilot-project-in-ashland-county-for-flood-reduction-efforts/article_48b03736-d3c6-11e9-bf51-cb3aa2ce0564.html

Wetlands and Streams

Summary of relevant research

The Lake Superior Binational Program, a coalition between agencies of the U.S. and Canada, identified habitats to protect Lake Superior from degradation (The Lake Superior Binational Program 2015). Of these targeted habitats, watersheds and tributaries were deemed the least healthy. Strategies designed to improve the health of these ecosystems include restoring and protecting wetlands and riparian forests, ensuring there is no loss of wetland area and function within the entire Lake Superior basin, and prohibiting off-road vehicle use in wetlands to avoid transporting invasive plant species (The Lake Superior Binational Program 2015).

The Lake Superior Lakewide Action and Management Plan (LAMP) analyzed 20 regional units surrounding and including Lake Superior to recommend conservation actions to protect the Lake (Lake Superior Lakewide Action and Management Plan (LAMP) - Superior Work Group 2013). The units are based on quaternary watershed boundaries that were then grouped based on Lake Superior coastal environments. Notable characteristics of the Bad-Montreal regional unit, the unit in which the proposed pipeline expansion lies, include:

- flashy streams
- excessive sediments
- erosion and slumping of streambanks
- channels and gullies
- red clay soils interspersed with sand
- deeply entrenched water courses with high banks

Factors contributing to the erosion and excessive sedimentation include conversion of native forests to aspen and grass/pasture (LAMP 2013). Much collaborative work has been done in the region to address the sources of this damaging sedimentation through 'slow the flow' projects. The 'slow the flow' strategy has been in effect for several decades. Numerous partners including WDNR, other state and federal agencies, tribes, non-profits, and others have worked together to acquire funding and complete projects (see the Lake Superior Landscape Restoration Partnership – the Joint Chiefs project, for example; https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/initiatives/?cid=nrcseprd1415620.

Following the flood of 2016, the USGS documented peak-flow magnitudes and surveyed high water marks to create flood-inundation maps for the Bad River, Beartrap Creek, and Denomie Creek (Fitzpatrick et al. 2017). Massive flooding damage occurred elsewhere much farther up in the watershed (see photos in the extreme weather section above), though similar analyses have not been conducted for these other rivers and streams along the proposed pipeline. Flood damages amounted to over $23 million to roads and other infrastructure, and as of today some of this damage has not been repaired.

Well in advance of the devastating storms that hit the region, Stable Solutions LLC and Community GIS Inc. (2007) identified concerns in the Marengo River watershed and provided recommendations, which have since been fortified by subsequent investigations (e.g., Bad River Watershed Association 2013, Wisconsin Wetlands Association 2018). Concerns included:

- percent of watershed in open land or young forest, with a percentage greater than 50% contributing to greater runoff and erosion;
- deposition of sand in the lower reaches of the watershed;
- channelizing water runoff by road and ditch systems;
- restricting hydrologic access to floodplains;
- draining of wetlands contributing to the overall volume and velocity of water added to the river system during major runoff events.

Recommendations included:

- Reduce the amount of open land to reduce runoff and sedimentation;
- Recognize that upland land use practices can impact suspended sediment by reducing the volume and velocity of water entering the Marengo River and tributaries, especially during peak runoff events;
- Evaluate culvert installations and whether some runoff could be controlled by placement of inlet controlled culverts;
- Maintain stable slopes on all culverts placed and control erosion in areas where water enters road ditches and culverts. Use and promote *Best Management Practice Guidelines for the Wisconsin Portion of the Lake Superior Basin* for guidance;
- Identify and target priority wetland restoration opportunities.

The Marengo River Watershed Action Plan (Bad River Watershed Association 2013) built on the foundations laid by the Stable Solutions LLC and Community GIS Inc., 2007 assessment, identified numerous sources of problems, proposed healthy watershed targets, and prioritized objectives (see Tables 4.24 and 5.25). This plan was developed through a broad partnership of state and federal agencies (including WDNR), the Bad River Tribe, local non-profits, academia, municipalities, and local citizens. In 2013 the plan was approved by the USEPA for meeting the 9 element plan requirements (outlined in US EPA's 2003 "Nonpoint Source Program and Grants Guidelines for States and Territories"; Federal Register: October 23, 2003. Volume 68, Number 205).

Benck et al. (2017) also conducted a functional assessment of the Marengo River Watershed, with a focus on wetland restoration. They identified restorable wetlands, the ditch/drainage network, barriers to natural flow; and they developed a stream power index and severity index (indicating areas of high potential for erosion). They pointed out that detailed and current wetland information useful for prioritizing wetland restoration and protection is not available. More generally, it is commonly known among natural resource professionals in the region that detailed wetland information is unreliable for the region. More robust hydrologic assessment and well-documented demonstration projects are needed (Wisconsin Wetlands Association 2018).

Beechie et al. (2010) describe watershed- and reach-wide influences on river and stream ecosystem processes. They advocate restoration of streams based on local potential while recognizing that when the degradation occurs at the watershed scale (as is the case in our region, especially since the series of recent flood events), many restoration activities may be required at the scale of individual sites. Emerging research is highlighting the need for a shift toward process-based hydrologic restoration.

<u>Concerns the EIS and permits should address</u>
In light of these studies and recommendations, we believe it is important that the EIS and any permits issued include the following:

- Describe how the installation and maintenance of the pipeline will avoid degradation or loss of riparian forest and wetland acreage or function.

- Detail the steps that will be taken at every stream crossing to prevent furthering the excessive sedimentation already occurring due to erosion and slumping of streambanks.

- Examine the extent to which vertical, longitudinal, lateral, and temporal connectivity of waterways is disrupted by road/stream crossings. Because culverts act as pinch points and channelize flows, road-stream crossings are altering natural channel, floodplain, and wetland processes, causing floodplain disconnection and erosion-induced wetland drainage.

- Explain how containment would occur and how repair crews would access the site of a damaged pipe when roads and other infrastructure may be impassable.

- Analyze the likely high water levels and area of inundation that occurred in the 2016 flood for the Marengo River, Tyler Forks, Potato River, Silver Creek, and Vaughn Creek Watersheds. Assess the degree of damage that these waterways and the infrastructure crossing them experienced relative to the amount of flooding, erosion, and deposition. Explain how a pipeline would survive such flooding.

- Evaluate the potential hazards of sediment and debris remaining from previous storms; such debris can be easily mobilized in future rain events.

- Detail the precautions that will be taken at every stream crossing to protect stream habitat, and ensure aquatic organisms have passage up-and downstream. Ensure brook trout have access to critical spawning areas.

- Describe the additional precautions that will be observed at every crossing of an ORW/ERW.

- Analyze the amount of shade that will be removed temporarily and permanently at each stream crossing.

- Describe the post construction monitoring that will be undertaken to ensure the rights-of-way have been properly stabilized and restoration of streams and wetlands has been completed and is in compliance with permit requirements.

- Explain how construction and maintenance of the pipeline will be conducted in a manner consistent with Areas of Special Natural Resource Interest (ASNRI), such as Lake Superior (National Natural Landmark), Copper Falls State Park, and the Kakagon Sloughs (Ramsar site). Explain how these and all ASNRIs will be protected in the event of a spill during operation of the pipeline.

- Describe how the waste products from horizontal directional drilling under streams, and especially larger rivers (Bad, Potato, Tyler Forks, Vaughn, Marengo), will be stored temporarily and permanently.

- Inventory and characterize the wetlands that will be impacted during construction, maintenance, right-of-way clearing, and operation of the pipeline. Include types of wetlands, acreages, their condition and functions, GPS locations, and conversion of types (e.g., forested wetland to sedge meadow or scrub-shrub).

- Describe how various wetland types and the degree of difficulty in their restoration will be accounted for in the permitting process and mitigation requirements, if permitted. Some types of wetland are not as easily restored as others; for example, floodplain forest and peatlands are not easily restorable. Headwater wetlands are particularly valuable for biodiversity, fisheries, ecosystem functions (Colvin et al. 2019).

- Describe each impacted wetland in terms of USACE categories and explain the rationale for compensatory mitigation ratios to be used (if mitigation is required).

- Tie standards for mitigation to hydrology rather than vegetation, which is especially important in a sensitive landscape like this. Reconnect streams and wetlands with the hydrological system; restore and reconnect headwaters and floodplains. Explain how restoration and mitigation standards will accommodate the need for hydrological connection from headwaters all the way through the system to floodplains and major rivers.

- Detail the extraordinary measures that must be and will be taken to avoid the disruption of sub-watershed functions. Include measures to avoid incision in headwater areas, gully formation, sediment deposition in the floodplains, and disconnection between headwaters and floodplain.

- Describe the upgrades that will be undertaken at every stream/road crossing, such as additional culverts, bridges, and stage-release culverts. Current infrastructure is old, undersized, and often mis-aligned. The addition of a pipeline will increase the stressors on the existing infrastructure.

- Ensure that the grade at every stream/road crossing mimics the natural hydrology.

- Explain and detail the measures Enbridge will undertake to not only not contribute to the further degradation of the local watersheds, but rather improve their functional integrity. The integrity of local watersheds is already compromised by past land use practices and intensified by recent extreme storm events. It is imperative that construction, maintenance, and operation of a new pipeline do more than mitigate its impacts.

- Explain how constructing a new pipeline in a fragile ecosystem can be justified ecologically, given the findings and recommendations from the myriad of past studies (only some of which are mentioned above), especially after the great amount of time, energy, and financial resources that have been devoted by a coalition of partners (including WDNR) to accomplishing these recommendations in the region.

- Explain how routing a pipeline through this watershed will be consistent with ongoing restoration efforts, such as those in the Marengo River Watershed, which was targeted by The Great Lakes Restoration Initiative as a key watershed for restoration efforts (Marengo Wetland Functional Assessment, Benck et al. 2017).

- Include a cross-walk between the proposed pipeline route and the locations of restorable wetlands, the ditch/drainage network, barriers to natural flow, and severity index identified and mapped in the Marengo Wetland Functional Assessment (Benck et al. 2017) report.

Literature Cited

Bad River Watershed Association. 2013. Marengo River Watershed Partnership Project Watershed Action Plan. Ashland, WI. Available at: www.badriverwatershed.org/index.php/action/watershed-action-program/marengo-river-watershed-partnership-project/watershed-action-plan

Beechie, T.J., D.A. Sear, J.D. Olden, G.R. Pess, J.M. Buffington, H. Moir, P. Roni, and M.M. Pollock. 2010. Process-based principles for restoring river ecosystems. Bioscience 60(3):209-*222.*

Benck, K.M., K.J. Stark, and A.G. Robertson. 2017. Wetland functional assessment and wetland restoration prioritization framework: Marengo River watershed, Wisconsin. Saint Mary's University of Minnesota, GeoSpatial Services. Winona, MN.

Colvin, S.A.R., S. Mazeika, P. Sullivan, P.D. Shirey. R.W. Colvin, K.O. Winemiller, R.M. Hughes, K.D. Fausch, D.M. Infante, J.D. Olden, K.R. Bestgen, R.J. Danehy, L. Eby.. 2019. Headwater streams and wetlands are critical for sustaining fish, fisheries, and ecosystem services. American Fisheries Society Special Report 44(2): 73-91.

Fitzpatrick, F.A., Dantoin, E.D., Tillison, Naomi, Watson, K.M., Waschbusch, R.J., and Blount, J.D., 2017, Flood of July 2016 in Northern Wisconsin and the Bad River Reservation: U.S. Geological Survey Scientific Investigations Report 2017–5029, 21 p., 1 app., https://doi.org/10.3133/sir20175029.

Lake Superior Lakewide Action and Management Plan (LAMP) - Superior Work Group. 2013. Lake Superior Biodiversity Conservation Assessment: Regional Unit Summaries. 282p. (Updated May 2015). https://www.natureconservancy.ca/assets/documents/on/lake-superior/Lake-Superior-Biodiversity-Conservation-Assessment-Vol2-Regional-Unit-Summaries-Final-Sep2015.pdf (accessed 6/10/20)

Stable Solutions LLC and Community GIS, Inc., 2007. Marengo River watershed test case: Assessing the hydrologic conditions of the Marengo River watershed, Wisconsin. A Report of the Hydrologic Condition of the Marengo River Watershed. Prepared for the Wisconsin Lake Superior Basin Partner Team. http://clean-water.uwex.edu/pubs//pdf/marengotest.pdf

The Lake Superior Binational Program. 2015. A Biodiversity Conservation Strategy for Lake Superior: A Guide to Conserving and Restoring the Health of the World's Largest Freshwater Lake. https://www.natureconservancy.ca/assets/documents/on/lake-superior/A-Biodiversity-Conservation-Strategy-for-Lake-Superior.pdf (accessed 5/10/20)

Wisconsin Wetlands Association. 2018. Exploring the Relationship between Wetlands and Flood Hazards in the Lake Superior Basin. https://wisconsinwetlands.org/wp-content/uploads/2018/06/WetlandsFloodHazards_WWA_web.pdf

Hydrogeology and Groundwater

The proposed new section of pipeline will cross a complex and vulnerable area from a hydrogeological perspective, as well. This will be the subject of comments by others, experts in this field, which we have reviewed but will not attempt to repeat here. Suffice it to say that we are concerned about the potential for contamination of the Copper Falls aquifer, which is the source of drinking water for many area residents, including the City of Mellen. This needs to be addressed.

Ecosystems and Habitat

Summary of relevant research

The WDNR publication *Ecological Landscapes of Wisconsin: An Assessment of Ecological Resources and a Guide to Planning Sustainable Management* (2015a) identifies management opportunities and provides recommendations to guard against habitat degradation and protect ecological integrity. Specific to geographic areas where Enbridge Line 5 pipeline construction would occur are North Central Forest (chapter 12, Wisconsin Department of Natural Resources 2015b); Superior Coastal Plain (chapter 21, Department of Natural Resources 2015c); and Natural Communities, Aquatic Features, and Selected Habitats (chapter 7, Epstein 2017). The publication supports protection of entire communities, rather than individual rare species, to protect not only the species, but also the ecosystem functions and interrelationships among all of the species that are required for the persistence of the rare species.

This thorough compendium identifies the following threats that construction of a pipeline would exacerbate and makes recommendations for ecosystem protection that construction, operation, and maintenance of a pipeline would be inconsistent with.

- Protection of site hydrology is crucial for all types of wetlands, including forested seeps, northern hardwood swamps, black spruce swamps, northern tamarack swamps, northern wet mesic forests (white cedar swamps), alder thickets, emergent marsh, northern sedge meadow, ephemeral pond, and floodplain forest. Activities that compromise hydrology include road and right-of-way construction, development within recharge areas, elimination of forest cover, and dredging.

- Forested seep communities should be protected from ground water contamination, rutting, soil compaction, and channeling of surface water to protect sensitive species. These habitats are fragile and of high ecological significance. The cold, clean, well-oxygenated waters from the Penokee Mountains provide crucial habitat for many habitat specialists, such as drooping sedge (*Carex prasina*), Schweinitz's sedge (*C. schweinitzii*), bog bluegrass (*Poa paludigena*), marsh valerian (*Valeriana uliginosa*; threatened in Wisconsin), wood turtle (*Glyptemys insculpta*), Red-shouldered Hawk (*Buteo lineatus*), Blue-winged Warbler (*Vermivora cyanoptera*), and Winter Wren (*Troglodytes hiemalis*). Forested seeps should be identified and protected.

- Northern hardwood swamps provide important habitat for a diverse community of vegetation and wildlife. Those swamps dominated by black ash already face serious threats by emerald ash-borers. The additional disturbances posed by the heavy equipment associated with pipeline construction and maintenance, such as soil compaction, rutting, and channeling of surface water could push these forests beyond the point of recovery. Hardwood swamps are extremely sensitive to hydrological disruption.

- Black spruce swamps provide critical habitat for many species that reach their southern-most extent. Pipelines and other rights-of-way that cross these peatlands and tamarack swamps alter the hydrology and can have wide-reaching negative effects. Cutting a swath through conifer swamps, such as would occur for a pipeline, would create abrupt, hard edges, eliminating interior habitat important for a variety of species. Maintenance activities would have similar effects and act as a corridor for invasive plant species.

- Many rare plant species are found in northern wet mesic (white cedar) forests. Ground water hydrology is particularly important to the vegetation in this community. Preferential browse of young white cedar by white-tailed deer is leading to the senescence of this community type, as few seedlings and saplings survive the browse pressure. Cutting openings in cedar swamps creates a path for the invasion of exotic species, makes it easier for white-tailed deer to access the stand, and could result in increased windthrow and drying of soils.

- The integrity of northern sedge meadows is compromised by sedimentation, nutrient loading, invasive species, and construction of rights-of-way.

- Invasive species have become problematic in emergent marshes. Control and eradication are difficult and expensive.

- Ephemeral ponds provide essential breeding habitat for many species of amphibians and invertebrates, as well as foraging habitat for many species of birds, bats, and other mammals. Construction of roads and other rights-of-way compromise this habitat by isolating it from the surrounding matrix. Ephemeral ponds should be ecologically connected to surrounding forests (especially those without roads). Currently not emphasized in public planning processes, this community should receive greater protection.

- Floodplain forests are uncommon in northern Wisconsin, but are known to occur along the Bad, Potato, and Tyler Forks Rivers (Elias, pers. comm.). Some wildlife species depend on the structural characteristics of this habitat, namely large live and dead trees and snags, tree cavities, and a multi-layered (structurally diverse) forest canopy. The state of Wisconsin is in a unique position to protect "floodplain ecosystems at regional and continental scales" (Epstein 2017).

- The North Central Forest ecological landscape is known to contain important and unaltered rivers and streams, yet WDNR surveys of these waterways are far from complete and monitoring is uncommon.

- Many of the streams in the North Central Forest ecological landscape flow under a forested canopy. The good water quality of these streams (given the limited data) is likely because of the forested canopy, which serves to shade streams, maintaining cool water temperature, and which slows the flow of runoff, decreasing erosion and sedimentation (and hence eutrophication and diminished water quality).

- Over 23% of the land area of the North Central Forest landscape consists of wetlands, the majority of which are forested or shrub wetlands in good condition. These wetlands host native species, are generally free of invasive plant species, and are of high ecological value. This ecological landscape provides an important opportunity for the conservation of wetlands.

- In the Superior Coastal Plain Ecological Landscape, forested habitats along river corridors should be protected. All stands of boreal forest, floodplain forest, and rich northern mesic forest, as well as groundwater seep areas should be protected.

- Some watersheds within the Superior Coastal Plain never fully recovered after the cutover, as exhibited by unstable banks and massive erosion. Management and uses of these areas should focus on reduction of rapid run-off into streams.

Recognizing that construction and operation of a pipeline has negative impacts on wetlands and waterways, Goodale (2018) developed an index to assess cumulative adverse effects. Cumulative impacts must be considered under the Clean Water Act (40 CFR §230.7), the Endangered Species Act (50 CFR §402.14), and the National Environmental Policy Act (40 CFR §1508.7). Despite the cumulative impact assessments required by these laws, wetlands are often inadequately protected from cumulative effects.

Construction, maintenance, and operation of Line 5 would occur through multiple watersheds (White, Marengo, Bad, Tyler Forks, Potato, Vaughn, to name the larger watersheds), all of which are subwatersheds of the Bad River Watershed and ultimately Lake Superior. Each of these subwatersheds benefits from the functions performed by wetlands (e.g., flood water storage and retention of sediments).

Additionally, the pipeline would cross waterways at approximately 186 locations (though the exact number is currently unknown because the construction route remains unknown). Many of these waterways are known to be important Class I, II, and III trout streams. Many more of the small, unnamed tributaries are known only by the local fishermen and -women to support naturally sustaining populations of brook trout. The lack of survey information does not diminish the importance of these cold streams as trout refuges during times of hot temperatures and droughts, and sources of genetic diversity.

The Lake Superior Lakewide Action and Management Plan (LAMP 2013) lists 145 species and communities of conservation concern documented within the Bad-Montreal Region, through which pipeline construction is planned (Table 14.4).

<u>Concerns the EIS and permits should address</u>
In light of these studies and recommendations, we believe it is important that the EIS and any permits issued address the following:

- Detail for every wetland crossing:
  - the amount and configuration of forest cover to be removed;
  - the depth of the pipe and whether ground and/or surface water flow would be disrupted, and if disruption of ground and/or surface water is possible, detail the precautions to avoid such disruption;
  - the plan for monitoring changes in ground water and surface water flow following construction.

- Detail the plan for a) controlling, and b) monitoring exotic plant occurrences along rights-of-way following construction. Intensive collaborative efforts to control garlic mustard have occurred in the vicinity of Copper Falls State Park. Describe how pipeline construction, operation, and maintenance will not compromise these control efforts.

- Fragmentation of interior forest habitat will occur as a result of pipeline installation, especially in the areas northeast of Mellen.
  - Analyze the potential effects on forest interior species likely to occur in these areas. Include all species affected by forest fragmentation, not only those currently with statutory protection.
  - Analyze the effects of fragmentation, beyond the extent of forest clearing, on interior species likely to occur in these areas. Include pathways for invasive plant species, use by off-road vehicles, and travel corridors for white-tailed deer (and their effect on preferred browsed and grazed plant species such as white cedar, hemlock, Canada yew, and herbaceous species in the lily and orchid families).
  - Detail the exotic plant species likely to colonize the forested and wetland areas opened for construction of the pipeline.
  - Describe the methods to be used for maintaining rights-of-way (i.e., chemical, mechanical). Include how and when notification of landowners will occur.

- Describe the surveys conducted to determine the possibility of nesting/breeding T&E species, and the habitat needed for rearing of young; include timing, duration, geographical extent of surveys, as well as names and qualifications of contractors completing the surveys.

- Describe how pipeline construction and maintenance will avoid disrupting nesting/breeding/rearing of T&E species.

- Detail how and where silt fencing will be used, and what measure will be undertaken to ensure passage of wildlife, in particular, wood turtles and other herptiles.

- Provide results of baseline water quality monitoring, with definition of “baseline” used, of all waterways that will be crossed by the new pipeline. Provide complete background level information on vegetation, fish, mollusks, and macroinvertebrates for every waterway that will be crossed by the pipeline. Include dates of surveys, geographical extent, and names and qualifications of contractors completing the surveys.

- Provide results of continuous temperature monitoring to identify potential trout streams (should field surveys of fish populations not confirm the presence of native brook trout).

- Explain and justify allowing construction of a pipeline that counters key recommendations in the WDNR’s publication on Ecological Landscapes.

- Explain the potential effects of pipeline construction, maintenance, and operation on the species and communities listed in the Bad-Montreal Region (LAMP 2013).

- Conduct an analysis of cumulative adverse impacts, including:
  - potential of altered hydrology in multiple wetlands
  - changes in flood water storage capacity across the landscape
  - disruption of brook trout habitat at multiple stream crossings
  - risk of spill at multiple stream crossings
  - increased erosion, increased sedimentation
  - permanent removal of forest cover, combined with that lost due to powerlines, railroads, other infrastructure
  - new access roads fragmenting all habitat types
  - pathways for exotic plant species to spread
  - potential for headcutting, side blowouts, and gully formation across multiple ravines and associated effects of culvert and road washouts, erosion, road closures, and access for emergency response

Literature Cited

Elias, J., personal communication. Aquatic ecologist, retired. National Park Service, Great Lakes Inventory and Monitoring Division.

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.

Goodale, W. 2018. The Cumulative Adverse Effects of Gas Pipeline Development on Wetlands. Background and Assessment Process. Biodiversity Research Institute. A Product of the Association of State Wetland Managers Pipeline Permitting Project.

Lake Superior Lakewide Action and Management Plan (LAMP) - Superior Work Group. 2013. Lake Superior Biodiversity Conservation Assessment: Regional Unit Summaries. 282p. (Updated May 2015). https://www.natureconservancy.ca/assets/documents/on/lake-superior/Lake-Superior-Biodiversity-Conservation-Assessment-Vol2-Regional-Unit-Summaries-Final-Sep2015.pdf (accessed 6/10/20)

U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1998. Endangered Species Consultation Handbook Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act. https://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf

Wisconsin Department of Natural Resources. 2015a. The ecological landscapes of Wisconsin: An assessment of ecological resources and a guide to planning sustainable management. Wisconsin Department of Natural Resources, PUB-SS-1131 2015, Madison.

Wisconsin Department of Natural Resources. 2015b. The ecological landscapes of Wisconsin: An assessment of ecological resources and a guide to planning sustainable management. Chapter 12, North Central Forest Ecological Landscape. Wisconsin Department of Natural Resources, PUB-SS-1131N 2015, Madison.

Wisconsin Department of Natural Resources. 2015c. The ecological landscapes of Wisconsin: An assessment of ecological resources and a guide to planning sustainable management. Chapter 21, Superior Coastal Plain Ecological Landscape. Wisconsin Department of Natural Resources, PUB-SS-1131W 2015, Madison.

Incidents and Safety Issues

Enbridge has a poor safety record, as evidenced by the following and numerous other articles that are easily accessed from news reports in recent years. This record should lead the Department of Natural Resources and the residents of Northern Wisconsin to question Enbridge's assurances that they will not cause environmental damage to our land and water.

Experts say support damage part of a bigger Line 5 structural problem
https://www.record-eagle.com/news/local_news/experts-say-support-damage-part-of-a-bigger-line-5-structural-problem/article_1b76b9f2-b723-11ea-9be3-df39efea8b6d.html
A court order required Enbridge Energy to cease all transport operations of its Line 5 after Enbridge's disclosure in June 2020 of significant damage to an anchor support on the east leg of the Line 5 pipelines.

Kentucky natural gas line owned by Enbridge had defects not identified
http://www.hazardexonthenet.net/article/179229/Pipeline-defects-were-missed-by-operator-prior-to-fatal-2019-explosion.aspx
A federal report has revealed that a natural gas pipeline in Kentucky had several defects which its operator had missed during nine years of self-inspections prior to it suffering an explosion in August 2019. The pipeline, which is operated by Enbridge subsidiary Texas Eastern Transmission LP, exploded in the early hours of the morning, killing one person and injuring six others.

Enbridge fined $6.7 million for safety violations
https://www.startribune.com/epa-fines-enbridge-6-7-million-for-response-to-pipeline-safety-issues/571349992/
Federal environmental regulators have fined Enbridge $6.7 million for allegedly violating a 2017 consent decree, saying the company failed to remedy pipeline-safety issues in a timely manner.

Enbridge natural gas pipeline explosion in northern British Columbia was caused by corrosion
https://finance.yahoo.com/news/corrosion-caused-2018-enbridge-gas-165010060.html
Winnipeg, Manitoba, March 4 (Reuters) - An explosion and fire in 2018 along an Enbridge Inc. natural gas pipeline in northern British Columbia was caused by corrosion, Canada's Transportation Safety Board (TSB) said. The pipeline operated by Enbridge subsidiary Westcoast

Energy Inc. ruptured on Oct. 9, 2018, in a forested area near Prince George, British Columbia. No one was injured, but the blast led to the evacuation of 125 people, including from the Lheidli T'enneh First Nation.

In 2016 Enbridge was fined $177 million for spills in Michigan and Illinois.
https://www.justice.gov/opa/pr/united-states-enbridge-reach-177-million-settlement-after-2010-oil-spills-michigan-and

Enbridge was fined $2.4 million for the 2007 explosion deaths of 2 Superior men.
https://www.duluthnewstribune.com/business/2300949-enbridge-must-pay-24-million-fatal-explosion
In 2009, the WI Department of Justice charged Enbridge for over 100 violations of state water protections in central Wisconsin and fined the company $1.1 million.

2007 spill in Rusk County
https://chippewa.com/news/pipeline-spilled-126-000-gallons-of-oil-in-rusk-county/article_58312ef5-f9c9-5f1f-a812-3eaf5ff3b632.html#:~:text=The%20latest%20spill%20of%20at,the%20company%20and%20state%20regulators.

2007-08 Enbridge Energy Partners, owners of a 321-mile oil pipeline in Wisconsin, will pay $1.1 million to settle state officials' allegations that the company broke numerous environmental laws during construction
http://archive.jsonline.com/news/wisconsin/37009324.html/

Undetected cracks blamed for Enbridge gas pipeline blast in British Columbia in 2018.
https://www.townandcountrytoday.com/alberta-news/undetected-cracks-blamed-for-enbridge-gas-pipeline-blast-in-bc-in-2018-2137710
A delayed inspection and a failure to predict how fast cracks could develop from corrosion are cited in a report describing the cause of an explosion and fire in an Enbridge Inc. natural gas pipeline northeast of Prince George, B.C., in October 2018

Spills
http://world.350.org/kishwaukee/files/2017/02/EnbridgeMajorSpills_1996-2014.pdf
https://line9communities.com/history-of-enbridge-spills/

Enbridge Corporate rap sheet --- article listing information on many of the incidents above
https://www.corp-research.org/enbridge

EPA timeline for the Kalamazoo spill
https://www.epa.gov/enbridge-spill-michigan/enbridge-spill-response-timeline

Higher insurance limits on Line 9 not allowed
https://apnews.com/c367bb7dfe834df6bab95308a93c4224

Dane County attempted to demand higher liability insurance before allowing an Enbridge pipeline project to proceed. Lawmakers slipped a last-minute measure into the 2015-2017 state budget to prohibit counties from requiring higher insurance limits if a pipeline operator already carries comprehensive liability insurance.

Helicopter crash killed pilot of Enbridge flight
http://www.businessnorth.com/kuws_wisconsin_public_radio/pilot-dies-in-enbridge-helicopter-crash/article_5bdd1838-dcaf-11e8-afe3-b333ea21bd14.html

A leak or spill from the new pipeline, which, given the above described record, seems to be a question of when, not if, would cause disastrous contamination of streams and wetlands in the Bad River watershed, the Copper Falls aquifer, which is the source of drinking water for thousands of area residents, and Lake Superior itself, the largest expanse of freshwater in the world. The lake supports "diverse aquatic and near-shore habitats. Sandy beaches, rocky shorelines, [and] wetlands . . . can all be found here. Each of these habitats--and their collection of plants is unique. Some are found nowhere else on Earth."
https://dnr.wi.gov/topic/greatlakes/learn.html

The Ashland area just spent many years attempting to recover from an environmental disaster that contaminated Chequamegon Bay 100 years ago. We don't need any more disasters brought on by a company that prefers to pay millions in fines rather than operate their pipelines safely. Given the uncertainty of the long-term market for fossil fuels, Enbridge may leave the citizens financially responsible for spills and remediation.
https://www.wpr.org/xcel-final-phase-complete-ashland-superfund-cleanup

Conclusion

Much, highlighted above, is known about the portions of Ashland and Iron Counties through which the new pipeline would pass, and it gives rise to grave concerns about the probable adverse impacts of the project. Much more is not known. The area is one of complex hydrogeology, few surveys or inventories, undocumented trout streams, flashy and fragile streams, a sensitive aquifer and treasured recreational sites, including Copper Falls State Park. It is sacred to local Ojibwe bands. The full scope of the environmental impacts which could result, were this project to proceed, would probably not be known until it is too late.

We hope that DNR will fully incorporate the findings and recommendations of all literature we have cited herein, as well as additional relevant current research, in the EIS. We also hope the Department will wait until the EIS is complete, or at least preliminarily assembled, before making any permitting decisions. It is difficult to comprehend how an EIS can be written when the exact route of the pipeline is not yet known, but it is even more difficult to understand how waterway and wetland crossings can be permitted when the route is unknown (which waterbodies and wetlands will be crossed?) and the EIS is not complete. The permitting should be informed by the EIS, or the latter is no more than a meaningless exercise.

It is also important that the EIS address the risks and costs associated with a continuation of the fossil fuel economy. Governor Evers Climate Change Task Force has only begun its analyses and development of a plan for Wisconsin and DNR is, or should be, part of this effort.

Water is the lifeblood of northern Wisconsin. Rivers and streams in the Bad River watershed flow north from the Penokees into Lake Superior. These lands are a terrible location for an oil pipeline. A pipeline exposed by floods is vulnerable to further damage and a devastating spill. In 2016, a downpour of 10-16" sent raging torrents of water through the ravines, busting through aged culverts, peeling off asphalt, and tearing down vegetation. In 2018, another storm struck. Severe weather events are increasing in frequency and severity. The next storm could wash soil away from beneath the pipeline or send debris crashing into it. If another catastrophic flood occurs and roads have been washed out, there would be no way to stop an oil spill from coating the riverbed, killing fish, destroying wild rice beds, washing up on the shores of the islands, and wiping out tourism and our way of life, both spiritually and economically.

We strongly encourage you to deny the requested permits.

The League of Women Voters of Wisconsin