

Dear Wisconsin DNR,

We are writing today with encouragement for you to deny the Enbridge Line 5 Re-Route project through the Bad River watershed.

Guiding Principles and Background

It is unclear how you might justify approval of a new fossil fuel project, as the [UN Secretary General António Guterres has recently made clear](#) that the IPCC report says we must do more, and by that, he especially stresses doing LESS with fossil fuel development. Over and over again he speaks of our failure to reduce fossil fuel usage as leaders provided false promises that lacked associated action. He insists leaders must no longer lie or delay, stressing fast change is necessary if we hope to save a future for our children and that change must focus on protecting our natural world.

If Secretary-General Guterres' urgent plea is to be heeded, a DENIAL of the Line 5 project is the only way to align with your mission:

[Wisconsin Department of Natural Resources Mission:](#)

“To protect and enhance our natural resources:

our air, land and water;

our wildlife, fish and forests

and the ecosystems that sustain all life.

To provide a healthy, sustainable environment
and a full range of outdoor opportunities.

To ensure the right of all people
to use and enjoy these resources
in their work and leisure.

To work with people
to understand each other's views
and to carry out the public will.

And in this partnership
consider the future
and generations to follow.”

You'll see it's not so different from that of [Minnesota's DNR](#)...

“The mission of the Minnesota Department of Natural Resources (DNR) is to work with Minnesotans to conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life.”

Minnesota regrettably decided to permit Enbridge's Line 3 re-route, much to the current misery of those of us along the Line 93 (Line 3 Replacement pipeline; henceforth “Line 93”) corridor who

now live with so many negative impacts to our region. In the aftermath of the Line 93 construction, we see a path of devastation across our state, cutting directly through Indian Country and affecting all the inhabitants of this land; swimmers, crawlers, flyers, four-leggeds, as well as humans.

Learning From Other Pipeline Projects, including Line 93

The draft EIS is incomplete in several key ways, which would lead DNR to make a bad decision. Please consider the input from Downstream Strategies report entitled [*Pipeline Impacts to Water Quality: Documented impacts and recommendations for improvements \(2019\)*](#) and our experience with Line 93 as you consider any permit conditions and restrictions .

This Downstream Strategies report (hereafter DS report) examined real-world experiences with four pipeline projects: Mountain Valley Pipeline and WB Xpress Pipeline in West Virginia and Virginia, the Rover Pipeline in West Virginia and Ohio, and the Mariner East II Pipeline in Pennsylvania. While these pipelines had individualized and shared concerns and failures, most were around sediment control and horizontal directional drilling – both factors which would be of concern in the Bad River watershed and which were factors here in Minnesota.

“The most significant water quality problems faced along both the WB Xpress and Mountain Valley pipelines have included inputs of sediment-laden water to streams. Most of the routes for these two pipelines cross mountainous terrain characterized by steep slopes, headwaters streams, and highly erodible soils. Reasons for failure of erosion and sedimentation controls that led to sedimentation in waterways were notably improper installation and lack of maintenance of the structures.

Mariner East II and Rover Pipelines both experienced significant water quality issues related to spilled drilling fluid during horizontal directional drilling, which contaminated streams and wetlands. Additionally, failure of erosion and sediment controls due to improper installation or insufficient maintenance, as well as a lack of approved erosion and sediment control best management practices, were major sources of violations for both pipelines.

This report also offers recommendations for improving regulation and oversight, best management practice design and implementation, and construction techniques for large-scale pipeline projects. These recommendations are based on observations of what went wrong during construction of the four pipelines, and techniques and requirements that are working to minimize water quality impacts. Notable recommendations include requiring site-specific stormwater plans for all stream and wetland crossings, encouraging companies to complete construction projects in shorter sections, and increasing regulatory inspections at the expense of the pipeline companies.” [Executive Summary, page iv]

Indeed, as citizen monitors, two of whom are abutters to the Line 93 corridor, one just north of where the pipeline crosses under Mississippi River at her headwaters along Great River Road (Clearwater County 40) and another who lives at the Line 93 crossing of Mississippi River also

along Great River Road (Aitkin County 10), **we've witnessed first-hand not only the failures of planned implementations for environmental controls and refusals to adhere to permitted requirements during construction, but also the damage resulting from the rush of construction** as Enbridge installed this pipeline in a very short 10-month window, as opposed to the 2 years of construction proposed during the application process.

This DS report discusses the processes by which pipeline construction can impact the environment, but more importantly, it focuses on the areas where states learned hard lessons, and it provides important researched recommendations to states facing permit decisions for pipeline projects.

Pipeline impacts on recreation, drinking water, and aquatic life

Recreation: Increased turbidity may impact fishing, boating, and swimming opportunities in waterways.

Drinking water: Pipeline construction can impact both surface and groundwater resources utilized by public water providers and private drinking water wells.

Aquatic species: Pipeline routes may cross spawning areas for many types of fish, including important trout spawning areas. The native Eastern brook trout lives and reproduces in only the cleanest, coldest streams. Removal of forest canopy and sedimentation will diminish trout habitat.

Pipeline Impacts to Water Quality report, page 3

The DS report notes that use of Best Management Practices (BMP) on pipeline projects can be hindered by local regulations as well as these factors (page 5), all of which we witnessed during Enbridge's Line 93 construction:

1. the correct BMPs were planned, but were not installed correctly or at all;
2. inappropriate BMPs were installed, or BMPs were inadequate for the conditions; or
3. BMPs were improperly operated and maintained.

An overview is provided for each of the four studied pipelines including photo-filled case study summaries, as well as an overview of the important role Citizen Monitoring can have in identifying impacts before, during, and after construction (page 11).

Lesson 1: Construction has permanent and severe impacts to the environment, despite Enbridge's claims to the contrary

Unfortunately, BMPs espoused by the pipeline industry do not adequately address the need to protect groundwater. For example, wherever shallow groundwater is within 30 feet of the surface deep trenching, HDD and the use of sheet pile to stabilize trenches can lead to pollution of groundwater by frac-outs and disruption of aquifers by breaches. In Minnesota, Enbridge caused at least 28 frac-outs (we have evidence that there are more that weren't reported) and 3 major aquifer breaches (again, we have evidence of far more). These projects need more

pre-design and pre-construction investigation and necessitates groundwater specific BMPs and reporting/notification. Based on our experience in Minnesota we strongly recommend the following:

- The volumes of drilling mud used, recovered, or lost shall be reported by the applicant for each HDD crossing.
- Areas with shallow artesian aquifers within 65 feet of the surface should have geotechnical borings at a spacing of no less than 500 feet that penetrate ten feet deeper than any proposed excavation, HDD, or sheet pile installation.
- At HDD locations suffering inadvertent mud loss and frac-outs monitor wells shall be installed upgradient and downgradient of the pipeline easement. The water quality shall be analyzed for the components of drilling mud including soda ash, bentonite and any other additives used for the HDD.

As we believe your hope would be to implement restrictions and conditions to prevent damage to the environment if you would decide to permit, we believe adhering to these recommendations can potentially help Wisconsin avoid some of the devastating experiences Minnesota had in our relationship with Enbridge. Three breached aquifers and many frac-outs still suspect in our waters is what we citizens are left to monitor. We are hopeful that we leave you forewarned, and thus, forearmed.

Current work in Minnesota by White Earth Reservation et al includes flyover data of the entire Line 93 Corridor with thermal imaging, which appears to indicate [as many as six additional breaches](#) to those three currently reported by MDNR.

The closing Recommendations section in the DS report would help inform Wisconsin DNR on some of the construction problems, alongside some potential solutions (page 27). Adhering to these recommended guidelines can help prevent Wisconsin seeing a re-iteration of the Minnesota experience on the Line 93 build.

Table 2: Pipeline construction problems and potential solutions

Pipeline construction problems	Potential solutions
Controls are not installed or maintained properly	More inspectors, more frequent inspections, construction of pipeline in smaller segments, and taking an appropriate amount of time for completion
Controls are not in place	More inspectors, more frequent inspections, and stiffer penalties for violations
Large-scale projects with extremely large areas concurrently under construction	Construct pipeline in smaller sections and at a slower rate
Intense storms: heavy rain, short duration	Include more intense storm events in calculations during the design phase
ESCs not sized correctly in headwaters watersheds	More focus on the specific environments during design phase
Management and communication problems result in a delay in addressing problems on the ground	Construct pipeline in smaller sections
IRs associated with HDD	More detailed site analysis prior to drilling and an onsite professional geologist during drilling
Construction across ridgetops and headwaters watersheds	Extra attention to drainage area calculations during the design phase and implementation of ESCs specially designed for these sensitive environments.

Lesson 2: Partner with citizens to understand potential impacts and to monitor projects

We encourage you to resist Enbridge's assumptions and insinuations that citizens should be treated as your enemy.

Along the Line 93 construction project here in Minnesota, citizen monitors were often the first ones aware of violations to the permit, with agencies being dependent on these citizen reports to discover infractions not readily communicated during construction by Enbridge.

Citizen monitors can reveal in-field concerns, and can play an important role in discovering areas that might not have been considered or foreseen by agencies and/or applicants. Having more intimate, longstanding, and direct contact with the land, especially throughout the seasons, local monitors can understand changes more readily than those unfamiliar with this landscape. They can also be key in reporting violations, as evidenced in Minnesota for the Line 93 project.

The Willow River frac-out was a key example [as seen in this posting](#) that includes video detail of a violation discovered just after the July 4th holiday in 2021 by citizen monitors during an expected pre-drilling monitoring effort. Monitors found Enbridge already drilling and a couple hours into monitoring, witnessed a frac-out of warm drilling mud into Willow River. There were no Enbridge response team members present though DNR Officers were on-site and threatening to arrest people - before the frac-out was reported to the MPCA - including as citizen monitors were attempting to secure water samples. Aitkin County Sheriff Dan Guida reported he knew about the frac-out and noted to the citizens, "Enbridge is taking care of it", again prior to the frac-out being reported to MPCA. No water samples were taken, save those taken by the citizen monitors, at risk of arrest by Minnesota DNR Conservation Officers, seeming instead to work at silencing and/or disparaging the monitors. During the day of monitoring DNR officers were surveilling and arresting people while the frac-out occurred.

Citizen monitoring includes the full scope of reporting from pre-construction challenges through post-construction monitoring.

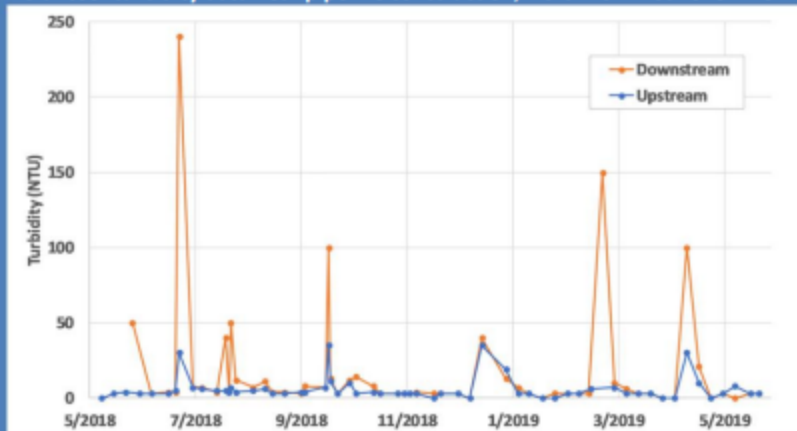
Citizen monitoring data and observations

Trout Unlimited and West Virginia Rivers Coalition have teamed up to train citizen volunteers in West Virginia and Virginia to monitor streams that support trout as well as high-quality warmwater fisheries at risk from oil and gas development. The WV-VA Water Quality Monitoring Project has developed a protocol specific to natural gas pipeline construction. This protocol provides volunteers with the tools needed to identify erosion and sediment impacts before, during, and after construction activities (West Virginia Rivers Coalition, 2019). As illustrated below, citizen-collected photos show sediment impacts in streams, and citizen-collected data demonstrate increased turbidity downstream of MVP construction.

A sediment-laden tributary enters Blue Lick in Monroe County, West Virginia, downstream from MVP construction, as documented by volunteers



Volunteer turbidity data near pipeline construction, North Fork Roanoke River



Source: Photo and data from Lemon (2019). Note: Values of 0 are actually less than 3, the minimum detection level of the secchi tubes.

Pipeline Impacts to Water Quality report, page 11

Lesson 3: Acknowledge that some areas are fundamentally unsuitable for pipeline construction

Enbridge and its consultants will systematically downplay environmental risk.

Based [on testimony from reitred MDNR pipeline specialist Paul Stolen](#) on 11/19/2014 and for years thereafter, it was clear that the LaSalle Valley along the proposed Line 93 route was a place that should have been considered unsuitable for this type of project. His testimony was based on publicly available geology of the area and also geotechnical investigations performed by pipeline companies. Other independent geologists reviewed and confirmed Mr. Stolen's interpretations. Nevertheless, Enbridge's consultant Barr Engineering asserted and testified that "none of the data collected suggests that a pipeline will adversely affect hydrologic conditions during and after construction." Hindsight unfortunately vindicates Mr. Stolen's testimony and shows Enbridge and Barr to be terribly wrong: [Line 3 Replacement Project LaSalle Creek Corrective Action Plan](#).

The following from the Line 93 project timeline and post-construction review might assist your decision-making:

- [Line 3 Hot Potato: Permit Process Failure and what we can do about it](#). [Video: Regulatory Capture and the Citizen Voice]
- [How the MN DNR let Enbridge Rupture an Aquifer](#) [9/23/21 Citizen Challenge to DNR failure to stop Enbridge from causing further breaches]
- [Enbridge Line 3 Aquifer Breach in Clearbrook, MN](#) [Video: Overview of Impacts]
- [The Line 3 Aquifer Breach at Clearbrook Terminal in Jan. of 2022](#). [Video: Technical Focus]
- [DNR lacks transparency in holding Enbridge accountable for Line 3's environmental damage](#)
- [As many as six new aquifer breaches possible along Enbridge Line 3 route, court filing says](#) [Evidence for Minnesota Department of Natural Resources, et al. v. Manoomin, et al currently in progress.]
- Fond du Lac Flyover [Video: to add here Wednesday... in progress]
- Broberg interview [Video - possible add before Friday... in progress.]

Lesson 4: Plan for comprehensive permit oversight and enforcement

Permit oversight and enforcement are key and I include a few from our experience and the DS report:

- **Ensure "independence" of independent environmental monitors.** Based on our experience with Enbridge on the Line 93 project, 17 of their 40 "independent" environmental monitors were previous Enbridge contractors or employees. Previous employment for an applicant should disqualify a monitor as "independent" and it may provide insight as to why several violations witnessed in Minnesota were not reported in a timely or transparent manner. Key to inspections are that they are: frequent, sufficient, and performed by trained, independent inspectors.
- **Site-specific stormwater management plans.** We are unaware of any on-site independent management personnel or equipment during Line 93 construction.
- **Full evaluation of trenchless stream crossings.** While our experience agrees that HDD can be a least destructive way to cross streams, it is not a panacea. Here in

Minnesota we saw Enbridge imply the low-risk of HDD, while even their pre-construction borings seemed to indicate an assurance that frac-outs would occur, and, in fact, might be common. Additional geotechnical borings in areas where HDD and/or sheet piling will be used can reduce the uncertainties that might be revealed with construction, as we found here in the Mississippi Headwaters.

- **Designated stormwater manager.** While company stormwater managers can be influenced by profits and timelines, state designated overseers can have a narrow role of environmental impact monitoring to permit expectations. As mentioned above, the independence of monitors on the Line 93 project was insufficient to assure ready reporting of concerning impacts.
- **Improved communications strategy.** Requiring applicants to provide all air photo, drone images and remote sensing data employed before, during and after construction within five working days of acquiring the data can allow for timely reactions to concerns. Real-time web updates on all work sites can also give quicker insight to indicator data.
- **Online mapping tools.** Several mapping tools were used by citizen monitors to document the concerns along Enbridge's Line 93 route. [Mapping the Black Snake](#) was a tool used early on that showed concerns from Alberta to the protest of construction and [Watch The Line MN](#) had a [project map](#) that included hundreds of recordings of before and during construction details in hopes to assure a return of the landscape post-construction to promised conditions.
- **Real-time water quality monitoring stations.** The closest we had were citizen monitors... though we support DS report recommendation for these tools to help assure adherence to permitted agreements.
- **Increased fines and permit fees.** Again, Minnesota has Line 93 experience with this recommendation as well with MDNR filing a [\\$3.32M mitigation and penalty funds](#), though the \$20,000 maximum administrative fine was likely irrelevant to a company the size of Enbridge. Minnesota is currently considering legislation to increase these fines to \$20,000 per day of violation. That would have taken Enbridge from a \$20,000 fine to one of \$7,240,000, factoring in the Clearbrook breach which flowed from 1/21/2021 through 1/18/2022.
- **Stop-work orders.** Perhaps one of the most oft-heard questions citizens posed post-realization of the Clearbrook aquifer breach was why this violation did not stop construction for the project as a whole, when it was clear that Enbridge had not transparently reported the ongoing environmental damages. MDNR claimed a lack of authority. Stop-work order agreements in permits could have prevented this lack of authority over our own landscape as a Canadian corporation prioritized completion of it's pipeline construction above remedy of the bleeding aquifer.

Lesson 5: Require more modern BMPs than Enbridge proposes

When it comes to BMPs, the DS report offers several considerations that should be adopted.

- **Proper BMP selection for large drainage areas and across ridgetops and headwaters watersheds.** BMPs must be properly selected and sized based on the drainage area. A set of practices with specifications that address large drainage areas should be followed. Construction across ridgetops and headwaters watersheds poses a

challenge to stormwater control. Extra attention to drainage area calculations during the design phase and utilization of ESCs specially designed for these sensitive environments can help protect water quality in these areas. These practices can include, for example, diversion ditches or dikes on the uphill side of a construction area that transport water away from the right-of-way and help prevent controls from being overwhelmed.

- **Access road BMPs.** Controls to adequately handle flow associated with access roads must not be overlooked. This report documented instances where BMPs directed flow off the right-of-way and onto access roads, causing significant erosion and sedimentation of waterways. Like the pipeline corridor itself, access roads can channel runoff and sediment, often directly into streams and waterbodies, if ESC practices are not in place for the road surface and associated ditches and conveyances. Large pipeline projects typically have many miles of access roads.
- **Vegetative stabilization specifications.** Specifications regarding vegetative stabilization in challenging conditions, such as steep slopes or shade, should be developed and followed during construction. Erosion resulting from vegetation that did not grow was observed on the MVP.
- **State-certified professional geologist.** A state-certified professional geologist should be on site to monitor HDD activities and to help guide responses should an IR occur.
- **Sufficient company staff to properly oversee and quickly respond to BMP failures.** When company staff are spread across an extremely large construction site, as is the case with many of these long pipelines, it can be difficult to mobilize and correct BMP failures before waterways are impacted. When staff are responsible for managing and monitoring very large areas, it can also take time to notice failures. Additionally, management structures often require that managers who are not on site make decisions necessary to quickly remedy failing BMPs or to adjust construction plans based on on-site conditions. Improving this management structure to allow for quick adjustments at a construction site would help prevent impacts due to failing BMPs or when the conditions on the ground necessitate additional controls than are described in plans.
- **Sufficient time on design and planning.** Perimeter controls, such as silt fences and filter socks, can act as channels when not utilized correctly. To remedy this, more time should be spent in the design and planning phase. The drainage area must be properly calculated. Additional ESCs—such as Jhooks, diversions, and outlet sediment traps—can be used to accommodate large drainage areas.
- **Use of short pipeline sections.** Large-scale pipelines should be built to completion in short sections, thereby limiting the total area disturbed at any one time. The pipeline projects described here utilized a construction method that left very long stretches of the pipeline route with active construction areas. For example, trees were cleared along most of the routes, then the trenches were dug along most of the routes. ESCs were installed as work progressed, but very large areas were denuded at one time. Typical construction projects must stabilize open areas before moving to new areas; this same strategy should be applied to pipeline projects. This would allow attention to be given to a smaller disturbed area during intense storm events by staff and ensure controls are

properly constructed and maintained. The extremely large construction sites also pose a challenge for regulatory agency inspectors.

Lesson 6: Require geotechnical investigations and robust pre-impact monitoring before you have to make decisions about permit conditions or permit approval

In Minnesota the agencies did not require robust monitoring before construction started, so now they have no way to quantify the extent of environmental damage nor the permanence or impermanence of impacts. We implore you to treat each wetland and each stream as a valuable and unique system that deserves particular attention and understanding. “General permits” and blanket statements about hydrologic conditions are not appropriate for a project of this scale.

Lesson 7: Look for ways to build trust, not destroy trust

The trust between the public and its government is a valuable resource, and should be cared for as such. Co-opting the process of environmental management, Enbridge spent nearly \$8M to buy Minnesota law enforcement force to silence those in opposition along their project route, including the over \$2M in compensation to MN DNR Conservation Officers. While these DNR Officers were tailing citizens who were monitoring the construction corridor in hopes to assure adherence to the permitted parameters, they missed environmental damages Enbridge was covering up; failures that included horizontal directional drilling frac-out and breaching of artesian aquifer. We recommend your resources be used to uphold permit conditions rather than as enforcers to help Enbridge stymie public opposition.

We, the members of Waadookawaad Amikwag – Those Who Help Beaver – a group of tribal members and citizen scientists working to monitor Enbridge’s Line 93 corridor post-construction, offer these above ideas for your consideration. Our hope is to save you from the same fate we here in Minnesota now face. It didn’t have to be this way.

Miigwech bizindaawiyeg. Thank you for listening.

Waadookawaad Amikwag Team Members:

Debra Topping, Nagajiwanaang 1854 Treaty

Jeff Broberg, Certified Professional Geologist, Founder MNWOO, etc...???

Jaci Christenson, Volunteer advocate working to protect water, address our changing climate, and uphold treaties

Jami Gaither, Retired Metallurgical Engineer, Abutter to Line 93 in 1855 Treaty Territory, Climate Justice Advocate

Shanai Matteson, Abutter to Line 93 in 1854 Treaty Territory, Climate Justice Advocate

Alexander Aman, Drone Pilot & Data Analyst, Climate Justice Advocate

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