



Waadookawaad Amikwag

Those Who Help Beaver

WaadookawaadAmikwag@gmail.com

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October 14, 2022

To: U.S. Army Corps of Engineers

Re: Requesting a REJECTION of Enbridge's Line 5 Tunnel Project Proposal

We are writing today to encourage you to deny the proposed Enbridge Line 5 Tunnel project through the Straits of Mackinac.

Guiding Principles and Background

It is unclear how anyone 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 fossil fuel development. Secretary General Guterres 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.

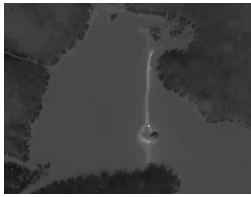
Enbridge's proposed tunnel project, if not simply a boondoggle by the Canadian Corporation to pretend they will be doing something - someday - about their troublesome pipeline, is regardless, an idea that makes no sense as we face the end of the fossil fuel era.

As is made clear by the escalation in opposition to new fossil fuel infrastructure, the public clearly sees that further investment in fossil fuels is inevitably only a way to ensure faster destruction of our environment. Our environment is being ravaged by extreme weather conditions, with Hurricane Ian giving us a clear demonstration of the power of wind and water to annihilate not only our ecosystems but also the infrastructure humans have built.

As Minnesota regrettably decided to permit Enbridge's Line 3 re-route here, those of us along the Line 3 Replacement pipeline corridor now live with many negative impacts to our region. In the aftermath of the Line 3 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 two-leggeds. We of Waadookawaad Amikwag work diligently each week to report Enbridge's post-construction damages as we encourage the state and federal authorities to begin an independent investigation of what Enbridge promised versus what we're seeing on the ground post-construction.

Enbridge Line 3 Construction Frac-outs

It is clear Enbridge overestimated their understanding of our geology as they experienced frac-outs at 63% of their Horizontal Directional Drilling (HDD) locations. Enbridge assured during testimony that this best method would bring little concern for Minnesota's topography. Yet, post-construction, the evidence shows they were clearly mistaken.



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Even now, after [reporting has shown massive HDD failures](#), [Enbridge claims their frac-outs are a “myth”](#) and Minnesotans continue today to wait for a [report from the Pollution Control Agency](#) (MPCA) on their investigations of these frac-outs, more than a year after Enbridge began flowing tar sands through their new pipeline.

Myth: Line 3 has had 28 frac outs/spills that have polluted Minnesota rivers and aquifers.

Fact: During river crossing construction, Enbridge took great care to protect the environment. All releases of drilling mud were contained and thoroughly cleaned, successfully protecting aquifers and downstream waters from any impacts. Releases like this are not unexpected and plans for managing them are written into the permits. The drilling mud used is nontoxic, has many everyday uses and is sometimes used to clean and protect water resources.

- According to the MPCA, **release of drilling fluid is not unexpected.** Enbridge followed **procedures for managing containment and clean up as specified in Project permits.**
- There was one inadvertent release of drilling mud into a river and it was **contained and thoroughly cleaned up.** Others were on land or nearby wetlands and likewise were quickly contained and remediated. In all cases, environmental control measures successfully protected aquifers and downstream waters from any impacts.
- Drilling mud is **non-toxic** and primarily **made up of naturally occurring bentonite clay (used in spas to treat skin allergies and acne and for home improvement projects) and water** and is **approved for use by the DNR and PCA.** Sometimes, it also includes xanthium gum, which is a common food additive often used in gluten free baking.
- **Bentonite clay is also approved as effective for cleaning contamination** in soil, water and air.

Note in the first bullet how Enbridge uses the MPCA's expectation for frac-out, as if they were the HDD experts.

The Minnesota Pollution Control Agency has said that [28 accidental releases of drilling fluid](#) — commonly known as frac-outs — occurred at a dozen river crossing locations between early June and early August 2021.

Those included 13 releases into wetlands and one into a river, when 80 to 100 gallons [spilled into the Willow River](#) in Aitkin County on July 6. The MPCA has said those releases are under investigation as potential violations of Line 3's water permit.

[MPR reported on the situation as Senator John Marty worked to get details.](#)



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These wording choices by Enbridge are not mistakes, they are carefully written to assure their message is factually accurate while not giving a full accounting of the truth. In addition to the [MPR News confirmation](#), the [Minnesota Reformer](#) gave details in these tables.

Drilling fluid releases during Line 3 construction

This table shows information published by the Minnesota Pollution Control Agency about spills of drilling fluid during Line 3 construction. Click the arrow at the bottom to see the full list.

Date	HDD Name (MP)	Volume of Release	Distance to Nearest Surface Water
6/8/21	Snake River (MP 843.2)	20 gallons	560 feet from wetland (w-155n46w12-b; W-176.0)
6/16/21	Straight River (MP 974.2)	Not estimated; flowed back into the drilling mud pit	1,850 feet from Straight River
6/25/21	Mississippi River HDD (MP 1069.7)	6,000-9,000 gallons	Occurred within wetland (w-51n24w27-d; W-1540.0)
6/25/21	Red River HDD (MP 801.8)	50 gallons	Occurred within wetland (w-160n50w9-a; W-39.0)
6/28/21	Red River HDD (MP 801.8)	400 gallons	Occurred within wetland (w-160n50w9-a; W-39.0)
7/6/21	Willow River HDD (MP 1066.5)	80 gallons	Occurred on western bank of Willow River (s-51n24w31-b; S-265.0)
7/15/21	East Savanna River HDD (MP 1085.9)	15-25 gallons	Occurred within wetland (w-51n21w20-a; W-1751.0)
7/16/21	Middle River (MP 836.0)	15 gallons	150 feet from wetland (w-156n46w7-c; W-124.0)
7/16/21	Middle River (MP 836.0)	50 gallons	100 feet from wetland (w-156n46w7-c; W-124.0)
7/16/21	Red Lake River HDD (MP 864.3)	80 gallons	375 feet from wetland (w-153n43w32-aa; W-305.0)
7/17/21	Willow River HDD (MP 1066.5)	40 gallons	250 feet from wetland (w-51n24w31-a; W-1527.0)
7/17/21	East Savanna River HDD (MP 1085.9)	10-15 gallons	Occurred within wetland (w-51n21w20-a; W-1751.0)
7/18/21	Clearwater River HDD (MP 875.4)	20 gallons	400 feet from wetland (w-151n42w4-a; W-355.0)
7/18/21	Clearwater River HDD (MP 875.4)	20-30 gallons	150 feet from wetland (w-151n42w9-e; W-359.0)
7/19/21	Red Lake River HDD (MP 864.3)	1,200 gallons	Approximately 5-10 feet from wetland (W-153n43w29-j; W-298.0); release migrated into this wetland



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Date	HDD Name (MP)	Volume of Release	Distance to Nearest Surface Water
7/19/21	Pine River HDD (MP 1017.4)	60-100 gallons	Approximately 620 feet from wetland (CA064bW; W-1047.0)
7/20/21	Mississippi River HDD (MP 941.0)	10 gallons	Occurred within wetland (CLC5098a1W; W-687.0)
7/20/21	Mississippi River HDD (MP 941.0)	100 gallons	Occurred within wetland (CLC5098a1W; W-687.0)
7/20/21	Middle River (MP 836.0)	200 gallons	550 feet from Middle River
7/20/21	Middle River (MP 836.0)	50 gallons	550 feet from Middle River
7/21/21	Willow River HDD (MP 1066.5)	50 gallons	Occurred within wetland (w-51n24w31-a; W-1527.0)
7/26/21	East Savanna River HDD (MP 1085.9)	10 gallons	Occurred within wetland (w-51n21w22-a; W-1755.0)
7/28/21	Clearwater River (MP 922.2)	20 gallons	550 feet from wetland (CLC5040_000RRa1W; W-579.0)
7/28/21	Clearwater River (MP 922.2)	15 gallons	550 feet from wetland (CLC5040_000RRa1W; W-579.0)
7/30/21	Mississippi River (MP 941)	50 gallons	Occurred within wetland (CLC5098a1W; W-687.0)
7/31/21	East Savanna River HDD (MP 1085.9)	480 gallons	Occurred within wetland (w-51n21w22-a; W-1755.0)
8/5/21	East Savanna River HDD (MP 1085.9)	50 gallons	Occurred within wetland (w-51n21w22-a; W-1755.0)
8/5/21	East Savanna River HDD (MP 1085.9)	900 gallons	Occurred within wetland (w-51n21w22-a; W-1755.0)

While evidence is clear that many frac-outs occurred during Line 3 construction, Enbridge continues to downplay concerns for frac-out with statements clearly disproved by Waadookawaad Amikwag’s on-the-ground investigation work. From photos last summer of frac-out fluids being pushed around the Mississippi River Headwaters (MP 941) during the day, to the upwellings from the land we are still uncovering in the area, it was clear Enbridge drilled all evening while doing minimal clean-up work in daylight, and yet today still fails to understand the impacts they’ve made to our water quality. The listed amounts in the above table for Enbridge’s first crossing of Mississippi belies the true level of drilling mud witnessed on the ground. While Enbridge reported only 2 frac-outs there, more were observed last summer when Jaime Pinkham was on-site for a visit. The remnants of these frac-outs continue to bleed into the headwaters and into other waterways, as witnessed by our ground-truthing volunteers.



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Before Enbridge determines that an HDD crossing technique is prudent and feasible at a given location, geotechnical surveys are conducted at the proposed site to determine the subsurface conditions. Section 3.6.1 of Appendix A of Attachment H describes the factors that must be evaluated to determine the technical feasibility of an HDD. This information, along with the HDD design and layout and any other available data, is used to determine if the HDD can be successfully installed. The HDD process, technical feasibility considerations and related information, are described in detail in Enbridge's HDD Design Report; including Hydrofracture Analysis Reports and Site-Specific Commentaries for each HDD crossing (see Attachment K). Based on these reports, the subsurface conditions at all the proposed HDD locations are amenable to successful installation of a drill.

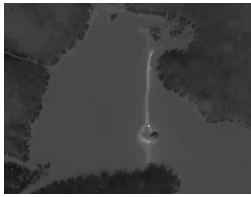
Enbridge assessment from their [Antidegradation Assessment Report - Section 401 Water Quality Certification](#) to MPCA noting their confidence in the HDD process for successful installation of a drill. No mention of whether this success would include prevention of frac-outs.

Mississippi River (MP 941.0)

- With a drilled length of 2,226 feet and a product pipe diameter of 36 inches, the Mississippi River crossing is well within the limits of current HDD industry capabilities.
- The topsoil encountered is composed of silty sand, silt, and clay with various amounts of organic matter and roots. Alluvium was encountered below the topsoil and is mainly comprised of alternating layers of poorly graded sand with silt, sandy silt, lean clay, silty clay, and clayey sand with varying amounts of gravel and occasional cobbles. Layers of glacial outwash and till, from cycles of glacial advancement and melting, were encountered below the alluvium and are composed of poorly graded sand, gravel with sand, and poorly graded sand with silt and gravel. Occasional cobbles were also encountered in the glacial outwash deposits. The glacial till is generally composed of silty sand, clayey sand, silty clayey sand, silt, and sandy lean clay.
- The risk of inadvertent returns due to hydrofracture is low over the majority of the crossing length. It is only within the last 70 feet of the crossing that the calculated factor of safety drops below 1.0, indicating an elevated risk of inadvertent returns due to hydrofracture. However, inadvertent returns that occur near the exit point as the bit approaches the surface are not typically problematic as they are often within the temporary workspace limits and can easily be contained.

Enbridge's indicates "low" risk, yet the environment seems exactly the place their documentation indicated might be a concern:

HDD	Place a rig on one side of the wetland and drill a small-diameter pilot-hole under the wetland/waterbody along a prescribed profile. Upon completion of the pilot-hole, the Contractor uses a combination of cutting and reaming tools to accommodate the desired pipeline diameter. Drilling mud is necessary to remove cuttings and maintain the integrity of the hole. The Contractor then pulls the welded pipe section through the drilled hole.	Generally suitable to cross sensitive wetland areas and riparian wetlands adjacent to waterbody crossings. Dependent on site-specific topography and the local geologic substrate. Not feasible in areas with artesian conditions, areas of glacial till or outwash interspersed with boulder and cobbles, fractured bedrock, or non-cohesive coarse sands and gravels.	<ul style="list-style-type: none"> • Avoids surface ground disturbance in riparian wetlands adjacent to sensitive or large waterbodies • Limits vegetation disturbance to within the permanently maintained easement 	<ul style="list-style-type: none"> • Potential for inadvertent release of drilling fluids in unconsolidated gravel, coarse sand, and fractured bedrock and clays • Requires ATWS on both sides of the crossings to stage construction, fabricate the pipeline, and store materials • Some tree and brush clearing is necessary to install guide wires for monitoring and steering the drill bit • Requires obtaining water to formulate the drilling fluid as well as hydrostatic testing • Success depends on substrate • Requires specialized equipment • May require spread move around
<p>Notes:</p> <p>^a For all methods except HDD, vegetation and trees within wetlands will be cut off at ground level along the entire workspace, leaving existing root systems intact; clearing debris will generally be removed from the wetland for disposal. For the HDD method, vegetation and trees within the wetland will be removed along the permanent right-of-way. Hydro-axe debris or similar may be left in the wetland if spread evenly in the construction right-of-way to a depth that allows for normal revegetation as determined by the Environmental Inspector.</p>				



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The site-specific assessment for the Mississippi crossing at MP 941.0, shown below, describes this area as a place with a propensity for frac-out, as some experts for Line 3 opposition testified during permitting. Paul Stolen expert testimony is shown below.

Enbridge Line 3 Project
Site-Specific Commentary

MP D941 Mississippi River Crossing
October 28, 2019

Subsurface Conditions

Six borings were taken along the HDD alignment, four of which (Borings B-7, B-8, B-10, and B-10A) were part of the geotechnical exploration program conducted in 2006 by Maxim Technologies for the MinnCan Project, while two additional borings (Borings MP 402 North and MP 402 South) were taken in 2014 as part of the geotechnical exploration conducted by Barr Engineering Company for the Sandpiper Pipeline Project. As the names suggest, Boring MP 402 North is located near the proposed entry point to the north, while Boring MP 402 South is located near the proposed exit point within the temporary workspace. The MinnCan Project borings are located between the two endpoints of the crossing, with Borings B-7 and B-8 on either side of 230th Street – County Highway 40 on the north end of the crossing, offset approximately 65 feet west of the Line 3 alignment. Borings B-10 and B-10A are closely spaced with a distance of only 50 feet between the two. They are located about 400 feet south of the Mississippi River in a wetland area, and are offset approximately 60 feet west of the alignment.

Topsoil was encountered at each boring location and extended to depths ranging from 0.4 to 2 feet. The topsoil is composed of silty sand, silt, and clay with various amounts of organic matter and roots. Topsoil thickness should be expected to vary across the site with differing vegetation cover, topography, and depositional environment. Alluvium was encountered in the test borings below the topsoil and is mainly comprised of alternating layers of poorly graded sand with silt, sandy silt, lean clay, silty clay, and clayey sand with varying amounts of gravel and occasional cobbles. Grain size distribution testing performed on alluvium samples collected from the recent and historical boreholes indicate gravel content ranging from 0 to 14 percent. SPTs conducted in the alluvium resulted in N-values that did not appear to be affected by cobbles or gravel, and ranged from the weight of the rig hammer to 39 bpf, with typical values around 7 to 12 bpf. These results indicate that the sand/silt alluvium generally has a loose to medium dense relative density and the clay alluvium generally has a soft to very stiff consistency.

Layers of glacial outwash and till, from cycles of glacial advancement and melting, were encountered below the alluvium and are composed of poorly graded sand, gravel with sand, and poorly graded sand with silt and gravel. Occasional cobbles were also encountered in the glacial outwash deposits. The results of the laboratory testing indicated gravel content ranging from 0 to 19 percent. N-values in the outwash were recorded between 10 to over 50 bpf. Some of the N-values may have been influenced by the presence of gravel, cobbles, or boulders. These results indicate that the outwash generally has a dense to very dense relative density.

The glacial till is generally composed of silty sand, clayey sand, silty clayey sand, silt, and sandy lean clay. Occasional cobbles were encountered in the till with gravel content ranging from 0 to 0.4 percent. N-values in the till ranged from 18 bpf to over 50 bpf, with most over 50 bpf. These results indicate that the till generally has a hard (occasionally very stiff) consistency for cohesive soils and a very dense relative density for cohesionless soils.

[Enbridge site-specific assessment of Mississippi River crossing at MP 941.0](#)



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eDocket No. 201411-104748-02
MCEA & FOH Scoping Comments
Exhibit 16

Exhibit 180

1 VI.J.2. Crossing waterways and wetlands by deep directional drilling. This method can
2 potentially greatly reduce impacts if it works as planned, and is used more and more as
3 equipment improves. The technique involves deep drilling under waterways and sometimes
4 adjacent wetlands. Such a technique uses specialized (and large for a 36 inch line) equipment,
5 and is usually called an "HDD." Depth can be 25-30 or more feet under the river bed, and length
6 of drills is variable, but can be 3,000 or more feet long in order to avoid sharp bends. The entire
7 pipe is welded for the length of the drill, and pushed/pulled through a bore that is created prior to
8 the bore.

9
10 Unfortunately, this technique can sometimes cause big environmental and construction problems
11 when things go wrong. This happened on a number of locations on Enbridge's proposed
12 Sandpiper/Line 3 route during the construction of the 24-inch MinnCan project. Drilling mud
13 escaped during the HDDs at a number of the rivers and wetlands, including at LaSalle Creek,
14 Mississippi river and Straight River as well as others. Mud is primarily bentonite, which is non-
15 toxic. However, additives are used. In the case of MinnCan, the construction company and
16 consultants tried to claim that the additives were a trade secret. DNR and PCA had a difficult
17 time obtaining the information on the additives, if at all. According to available information,
18 some additives are toxic to fish.

19 VI.J.3. Main impact issues: There are four main impact issues:

20
21 a) The portion of the Enbridge proposal that follows the existing corridors means that river
22 floodplains and the rivers themselves will be crossed at less than desirable locations if the offset
23 from the existing lines is as proposed by Enbridge. This is likely especially true at floodplain
24 crossings. Furthermore, adjustment of the centerline to try to cross the river itself at a
25 perpendicular could well result in impacts to other riverine features.

26
27 b) There is strong evidence that areas with upwelling groundwater increase the likelihood of
28 drilling mud reaching the surface or reaching the river via the riverbed or flowing from adjacent
29 areas. Crossing the floodplain at an oblique angle means the HDD length is longer, and likely
30 increases the likelihood of drilling mud releases.

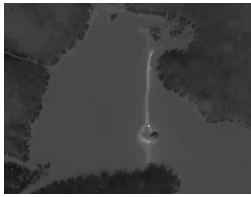
31
32 c) The portion of the Enbridge route between Clearbrook and Park Rapids had many locations
33 where drilling mud reached the surface in wetlands, riverbeds, and locations immediately
34 adjacent to rivers. In my experience with pipeline projects, this incidence was by far the highest
35 of any projects I have worked on as a regulator.

36
37 d) Drilling mud entering wetlands would be considered fill. On MinnCan, in some locations
38 many cubic yards of drilling mud entered wetlands. Drilling mud entering streams coats the
39 bottom, since bentonite is heavier than water.

40

Paul Stolen Expert Witness Testimony 11/14/2014

The second crossing of the Mississippi River by New Line 3 also showed serious concerns. Borings, done prior to construction, determined the geology of the route made clear that spills of drilling mud were common. That is not a LOW risk... but appears to be an assurance frac-outs would occur during HDD for the Enbridge pipeline project.



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Mississippi River Crossing MP 1069: Barr Engineering

- The alluvial sands and gravels are relatively permeable. A moderate amount of drilling mud loss was encountered while drilling test boring MR-HDD-East. About 30 gallons of mud was lost
- drilling through a sand layer from 58 to 68 feet (elevation 1189.9 to 1179.9 feet). About 60 gallons of mud was lost while drilling through the gravel layer from 85.2 to 93 feet (elevation 1162.7 to 1154.9 feet).
- About 40 gallons of drilling mud was lost in test boring MR-HDD-West at 48 feet (elevation 1194.2 feet). The sands and gravels may tend to collapse during the HDD process.
- Even with the use of drilling mud, borehole walls may tend to fall inward and collapse
- drilling through the alluvium, it was reported that heaving sands and borehole collapse was common. Borehole MR-HDD-East collapsed at 50 feet bgs and had to be cased with hollow stem
- auger to continue drilling. Borehole MR-HDD-West collapsed at a depth of 95 feet bgs. Tri-cone
- roller bit refusal was encountered in boring MR-HDD-East at a depth of 93 feet.

Slide from an HDD presentation by a MN Geologist to state agencies and lawmakers ~ December 10, 2021

Some suspect that [rushed construction](#), completed in less than a year versus Enbridge's promised two years of jobs for Minnesotans, may be the reason for some of the frac-out failures. And when Minnesota [Senator John Marty demanded data on the frac-outs](#), he was denied. The MPCA, as the permitting agency, failed to assure that Enbridge monitor and track the drilling mud used and recouped from the land, indicating the true amounts of chemicals remaining in the land will likely never be possible to determine. Just as concerning, the amount of water appropriated from the land also is likely to never be known.

Enbridge Line 3 Construction Deep Water/Aquifer Breaches

Post-Line 3 construction, we have three Minnesota DNR acknowledged deep water breaches into the land, two of which still flow water more than one-year after creation. Hundreds of millions of gallons have been reported lost, while a lone monitoring station in LaSalle Valley (there are at least 4 "seeps" remaining in the land almost a year after Enbridge reported the situation "repaired") showed over 800,000 gallons per month flowing from the land. If all seeps are equitable, this amounts to over 3 million gallons per month just at this one failure location. Clearbrook aquifer breach bled for almost a year and resulted in an [enforcement resolution demanding over \\$3M from Enbridge in penalties and mitigation funds](#).

A November 2021 thermal flyover of the Enbridge corridor gave insight to Waadookawaad Amikwag volunteers, who have now ground-truthed many of the almost four dozen most concerning sites of upwelling groundwater. In August 2022, as Enbridge's breach in the LaSalle



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Valley turned one year old, our public disclosure of evidence gleaned in the field forced the DNR to update the public of its July 11th notice from Enbridge of the continued water emergence. This was over seven months from their reported “fix” of the breach. Just as the January 2021 Clearbrook aquifer breach was not clearly reported by Enbridge to the DNR, being revealed only when an independent monitor disclosed the situation during a June luncheon, we see again, now post-construction, the deceptive hiding of construction impacts by Enbridge.

While not publicly noticed or added as an update on the [MDNR's Line 3 website](#), in late August Waadookawaad Amikwag discovered a 4th upwelling of water into the land. Recent measures and observations indicate a 4th deep water breach now bleeding water quickly from the land. The ongoing Enbridge infiltration of the land at this location also confirms significant problems in need of redress.

Recommendations from Minnesota's Enbridge Line 3 Construction Experience

As you can read in the attached comments provided to Wisconsin Department of Natural Resources, regarding their review of Enbridge's Line 5 Re-Reroute, Waadookawaad Amikwag lays out a series of Lessons Learned on the Enbridge Line 3 construction. We can see the dichotomy between their promises in testimony for permitting versus the results they gave Minnesota in reality.

- **Lesson 1: Construction has permanent and severe impacts to the environment, despite Enbridge's claims to the contrary**
- **Lesson 2: Partner with citizens to understand potential impacts and to monitor projects**
- **Lesson 3: Acknowledge that some areas are fundamentally unsuitable for pipeline construction**
- **Lesson 4: Plan for comprehensive permit oversight and enforcement**
- **Lesson 5: Require more modern BMPs than Enbridge proposes**
- **Lesson 6: Require geotechnical investigations and robust pre-impact monitoring *before* you have to make decisions about permit conditions or permit approval**
- **Lesson 7: Look for ways to build trust, not destroy trust**

As you may remember from the late evening comments on September 8th at the Straits of Mackinac, we are including for you these photographs of the land, provided by [R.I.S.E. Coalition](#) and presented by Nookomis Deb Topping, Carrie Chesnik, Sherry Couture, and Jami Gaither. In addition, we include a new photograph taken on 8/25/22 in Walker Brook Valley, depicting our latest confirmed deep water breach by Enbridge, which was unavailable that evening.

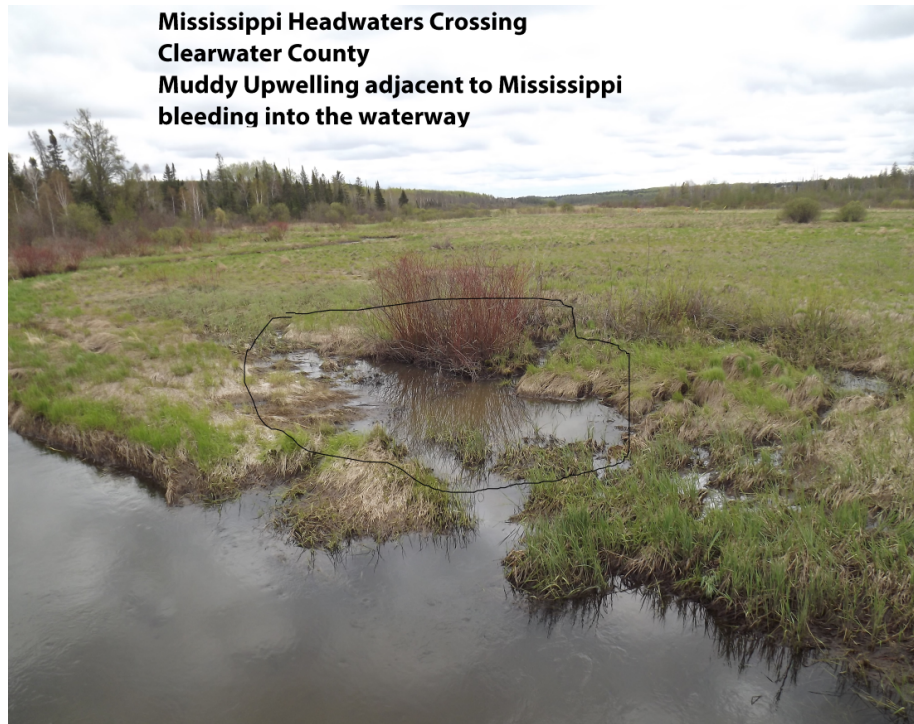


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**Mississippi Headwaters Crossing
Clearwater County
Muddy Upwelling adjacent to Mississippi
bleeding into the waterway**



**Mississippi Headwaters Citizen Monitoring 3-1-2022
Orange Water from upwelling Spring near the corridor
Dark Water from upwelling Frac-out area**

Credit: Alexander Aman

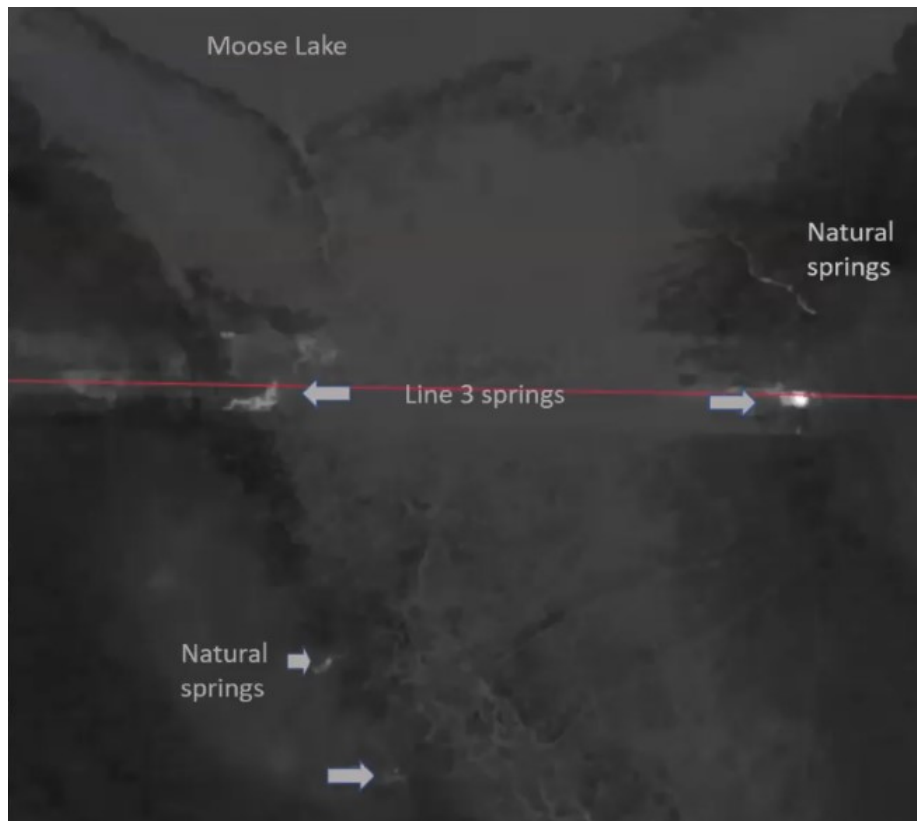


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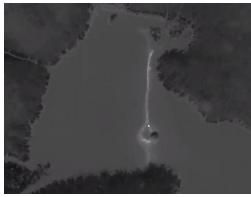
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**Enbridge Aquifer Breach
near Fond du Lac Reserve
bleeding for over a year
since creation.**



**Ron Turney
3/29/2022**

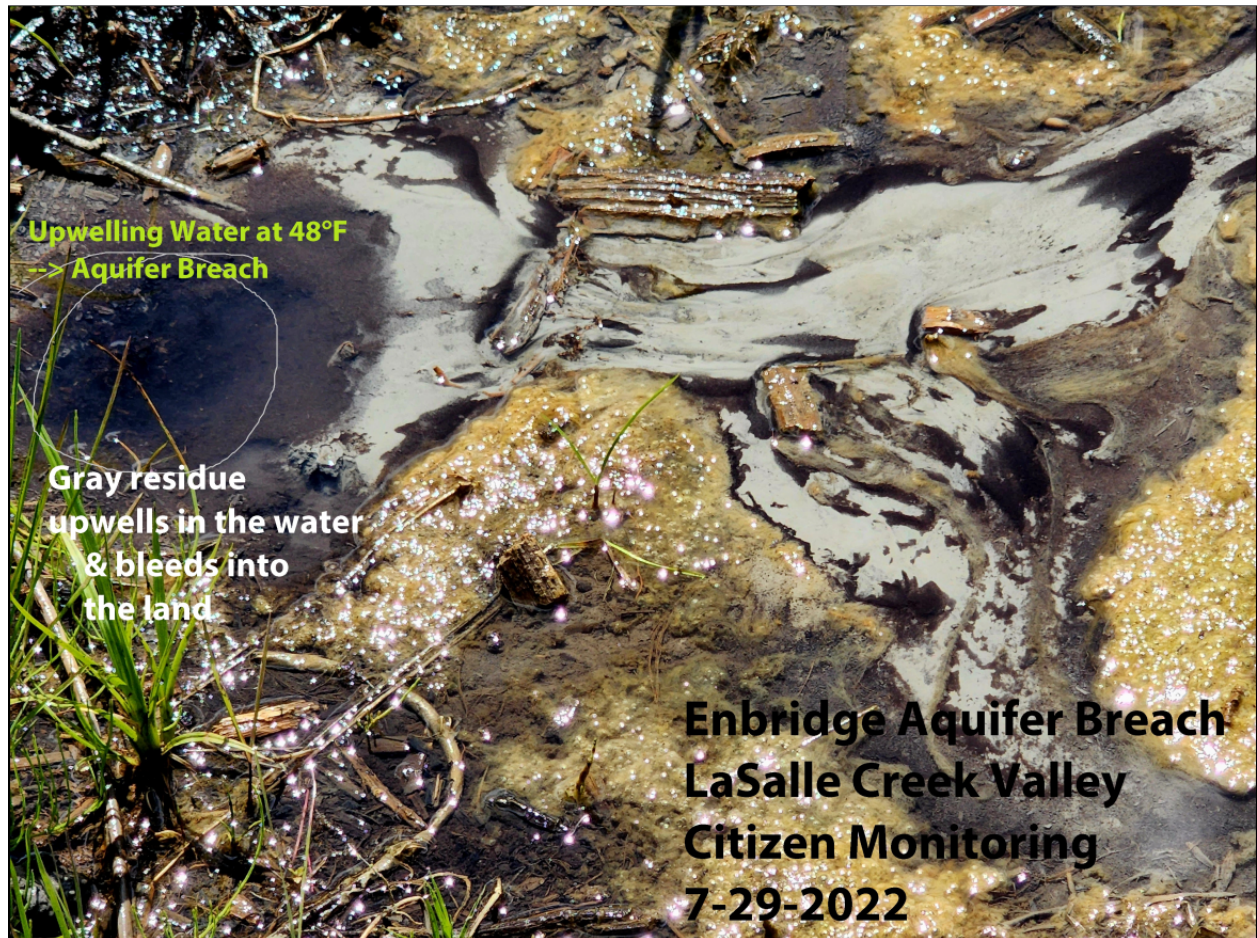


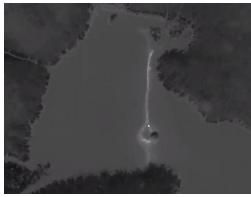
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Credit: Dan Gaither

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 Michigan from the same fate Minnesota now faces. It didn’t have to be this way.

Miigwech bizindaawiyeg. Thank you for listening.

On behalf of Waadookawaad Amikwag, thank you for your consideration.

[Waadookawaad Amikwag Team Members](#)

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

Jeff Broberg, Minnesota Licensed Professional Geologist, Founder [MNWOO](#) (Minnesota Well Owners Organization)

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



Waadookawaad Amikwag

Those Who Help Beaver

WaadookawaadAmikwag@gmail.com

[Waadookawaad Amikwag YouTube](#)

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

Gaagigeyaashiik / Dawn Goodwin, Gaa-waabaabiganikaag (White Earth) 1855 Treaty, [R.I.S.E. Coalition](#) Co-Founder, [1855 Treaty Authority](#) Alternate Board Member, [Indigenous Environmental Network](#), Sierra Club North Star Chapter Executive Committee Member

Bee Kakac, Climate and Social Justice Activist, Ecologist

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

Bwagwachinini & Migizikwe / John & Victoria McMillen, Nagajiiwanaang (Fond du Lac), Bear Clan & Eagle Clan, Retired FDL Natural Resources, Traditional Gatherers, 1854 Treaty, Cultural & Traditional Ecological Preservation Consultants/ Educators

Michele Naar-Obed, Climate Justice Activist, citizen scientist, Ally to Anishinaabe Water Protectors and Treaty Rights

Awanikwe / Debra Topping, Nagajiiwanaang (Fond du Lac) 1854 Treaty, [R.I.S.E. Coalition](#) Co-Founder

Dr. Laura Triplett, Associate Professor of Geology

Ron Turney, Gaa-waabaabiganikaag (White Earth) 1855 Treaty, [Indigenous Environmental Network](#) Drone Pilot