

## Fretwell, Tracy A - DNR

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**From:** Johnson Bridgwater [REDACTED]  
**Sent:** Wednesday, July 20, 2022 2:17 PM  
**To:** Lynch, Lawrence J - DNR  
**Cc:** Tom Jerow; Donald Behm; Dave Blouin; Allison Werner; Johnson Bridgwater; Bill Davis  
**Subject:** Electronic Submission of Joint Comments related to Flambeau Final Mine Closure Petition  
**Attachments:** Flambeau DNR Joint Comments 7\_20\_2022.pdf

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Dear Mr. Lynch,

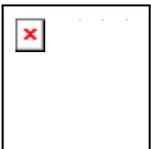
On behalf of Wisconsin's Green Fire, Wisconsin Sierra Club, and River Alliance of Wisconsin, as well as our members and our boards, we are formally submitting these comments related to the formal Petition for Issuance of Certificate of Completion of Reclamation for the Industrial Outlot of the Flambeau Mine, submitted by Flambeau Mining Company on November 4, 2021.

The Department of Natural Resources has made it clear that the intention is to approve the petition, and modify the overall mining permit as part of that process— without taking any action related to Stream C. We have outlined below a set of facts related to Stream C, along with a very specific list of recommendations that we believe would still allow for the closure to be issued, while also addressing firmly established issues related to Stream C.

We appreciate the opportunity to share our thoughts, concerns, and suggestions related to these issues, and we look forward to hearing from you.

Respectfully submitted,

**Dave Blouin, Wisconsin Sierra Club**  
**Tom Jerow, Wisconsin's Green Fire**  
**Johnson Bridgwater, River Alliance of Wisconsin**



**Johnson Bridgwater, Water Advocates Organizer**  
**River Alliance of Wisconsin**  
612 W. Main St, STE 200 | Madison, WI 53703  
608-257-2424 x115  
[www.wisconsinrivers.org](http://www.wisconsinrivers.org) | [jbridgwater@wisconsinrivers.org](mailto:jbridgwater@wisconsinrivers.org)

Pronouns: He/ his/ him



Wisconsin's Green Fire  
P. O. Box 1206  
Rhineland, WI 54501

Sierra Club of Wisconsin  
754 Williamson St.  
Madison, Wisconsin 53703

River Alliance of Wisconsin  
612 W. Main St.  
Suite 200  
Madison, Wisconsin 53703

July 21, 2022 (Electronic Delivery via Email)

Wisconsin Department of Natural Resources  
Attn: Larry Lynch – EA/7  
P.O. Box 7921  
Madison, WI 53707-7921

Email: [Lawrence.lynch@wisconsin.gov](mailto:Lawrence.lynch@wisconsin.gov)

Re: Electronic Submission of Joint Comments on Wisconsin Department of Natural Resources' decision to issue Final Certificate of Completion of Reclamation for the Industrial Outlot portion of former Flambeau Mine and Revised Mining Permit to Flambeau Mining Company (FMC)

Dear Mr. Lynch,

On behalf of Wisconsin's Green Fire, Wisconsin Sierra Club, and River Alliance of Wisconsin, as well as our members and our boards, we are formally submitting these comments related to the formal Petition for Issuance of Certificate of Completion of Reclamation for the Industrial Outlot of the Flambeau Mine, submitted by Flambeau Mining Company on November 4, 2021.

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Respectfully submitted,

*Dave Blouin*

*Tom Jerow*

*Johnson Bridgwater*

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The Flambeau Mining Company's application for Certificate of Completion of Reclamation for the Industrial Outlot and the Wisconsin Department of Natural Resources' draft approval of the certificate fail to address or even acknowledge that past mining activities contribute to ongoing contamination of Stream C with copper and zinc in excess of water quality standards.

Stream C drains the industrial outlot where sulfide-rich ore from the mine was crushed, stored, and loaded onto rail cars for shipment to Sudbury, Canada. The WDNR's website claims the department can not directly link the outlot to the stream's contamination for this reason: "Since no baseline water quality data was collected on Stream C prior to development of the project, the exact source of the metals cannot be conclusively determined." This implies that there is another source or sources for the copper and zinc at this time, or the contamination is due to naturally-occurring background levels of the metals which predate the mine.

We reviewed what is known about the sources for copper and zinc in Stream C and here is what we found:

1. According to the 1990 Final Environmental Impact Study (EIS) and the Environmental Impact Report (EIR) the sulfide-rich ore containing the metals is

buried under 10 to 90 feet of glacial deposits. This includes a cross section through Stream C's watershed where there was 40 feet of glacial till overlaid by sandstone bedrock and no precambrian bedrock was encountered in drilling.

2. While it is true that Stream C was not sampled prior to mine development, the soil was sampled across the mine site and found to have relatively low concentrations of copper and zinc. Copper concentrations in the topsoil were 6 - 9 ug/g similar to what was found in nearby watersheds (see item 4). Some of the samples were within the watershed for Stream C. In addition to bulk analysis, leaching studies of the soil and glacial till were conducted and found similarly low results for copper and zinc.
3. Groundwater was sampled before mine development and found to be relatively low in copper and zinc. So groundwater discharging to Stream C or wetlands can also be eliminated as a possible source.
4. In the 2012 water quality assessment of Stream C the Department used a widely accepted practice of evaluating reference streams to estimate natural baseline conditions well below the water quality standards currently violated in Stream C.
5. The 2012 report also documented some extremely high concentrations of copper and extremely low pH (2-4 pH) associated within the rail spur and truck washing station on the industrial outlot. The highest soil copper concentration reported was 2,900 mg/kg and was located at a former vehicle washing station. The finer soils (sand sized and finer) above and below the ballast material in the rail spur within the Industrial Outlot area had pH's as low as 2.5, almost certainly due to the oxidation of spilled sulfide ore. These low pH's also help to mobilize metals into the water column and ultimately enter the stream. The EIS & EIR showed the background pH's in the range 5.8 to 6.5.
6. The 2012 report also identifies several other sources for the copper and zinc contamination. However, the quantities and concentrations pale in comparison to what was found in and around the ore processing and loading areas on the industrial outlot.
7. The biofilter, originally designed to treat runoff waters from the Industrial Outlot, routinely discharged copper and zinc above water quality standards to Stream C. The lined biofilter was replaced with an infiltration basin shortly after the 2012 Water Quality Assessment.
8. To their credit, Flambeau Mining has been working with the Department to remediate the contamination and there has been a resulting improvement in water quality. Even so, Stream C is still listed by the U.S. Environmental Protection Agency as impaired for copper and zinc. The improvement confirms that the copper and zinc contamination is directly linked to the activities conducted in the industrial outlot.

9. A August 5, 2004 memo from Flambeau Mining to the Department about proposed monitoring of Stream C post-soil removal at the Industrial Outlot stated: “In 2003, Flambeau Mining Company evaluated the possible sources of the copper and determined that the rail spur area was the most likely source of the copper.” Flambeau Mining also noted in the memo that sampling in April 2004 indicated a lower level of copper in Stream C post-soil removal<sup>1</sup>.
10. Finally, let’s review the activities conducted at the mine site and the likely sources for the contamination of Stream C:
  - 1.8 million tons of ore containing approximately 181,000 tons of copper and no more than 900 tons of zinc were extracted from the mine. This ore was crushed and loaded onto rail cars in the industrial outlot.
  - Mining activities such as blasting, bulldozing, truck loading and unloading, ore crushing (up to 250 tons per hour) and rail car loading likely generated quantities of fine dust transported by the wind and/or loading spills and deposited on nearby soils including the watershed for Stream C.
  - Vehicular tracking and vehicle washing of sulfide minerals.

Taking the entirety of the information available to us at this time it is reasonable to conclude: 1) There was a release of sulfide mining wastes and/or sulfide ore containing copper and zinc to the environment, and 2) That release is contributing to the water quality impairment and contamination of Stream C, and 3) That the remediation work done to date has resulted in some improvement of water quality in Stream C.

We have two constructive suggestions to resolve this situation and restore the environment:

1. The Department should require Flambeau Mining to define the degree and extent of contamination under the state spill law using the Investigation and Remediation Code, NR 700. Much of this work has already been done and is summarized in the Department’s 2012 Water Quality Assessment. However the WDNR and Flambeau Mining did not follow the process outlined under NR 700 to address this unintentional release of a hazardous substance to the environment. We further recommend that they should use NR 720 to develop and set soil clean-up standards that are protective of surface water quality and proceed with remediation if necessary to meet the standards. There is a wealth of background information contained in the EIS & EIR on which to base these soil clean-up standards.
2. The Department should amend the Revised Mining Permit to require Flambeau Mining to resume sampling of Stream C. As demonstrated, there has been an

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<sup>1</sup> August 5, 2004, Jana Murphy, FMC to Larry Lynch, WI DNR, “Re: Proposed Monitoring Plan for Intermittent Stream C”

improvement in water quality and this should be tracked over time to determine the success of any additional remediation.

This year is the 50th Anniversary of the Clean Water Act. Twenty-five years after the Flambeau mine ceased operating, Stream C is not meeting its full water quality potential though it should be.

It is, after all, the mission of the Wisconsin Department of Natural Resources “to protect and enhance our natural resources: our air, land and water; our wildlife, fish and forests and the ecosystems that sustain all life...”