WETLAND MITIGATION IN MINNESOTA: One Nonprofit's Perspective

Jill Bathke, Natural Resource Scientist

Northeastern
Minnesota Center For Environmental Advocacy

• Heart of our mission: a reverence for nature and a fundamental commitment to sustain and enhance environmental quality for the benefit of future generations

Main Areas

- Natural Resources
- Water Quality
- Land Use and Transportation
- Energy Policy
- Environmental Review
- Litigation
- Partnerships
- Mining
Overview Of Presentation

I. PolyMet Project Wetland Impacts and Mitigation

II. NE Mitigation and the State/Federal Strategy

III. In-lieu Fee Mitigation
Wetland Mitigation

1. Avoid
2. Minimize
3. Mitigate (replace)
   • Wetland Restoration/ Rehabilitation/ Preservation
   • Purchase Wetland Bank Credits

• Generally, mitigation must occur within the same watershed as the impacts
PolyMet’s NorthMet Project

- PolyMet Mining Corporation has proposed to construct the NorthMet Mine
- Open-pit mining to extract copper, nickel and other metals
- Lake Superior Watershed
- 20 years of mining
Polymet-Northmet Site within the Saint Louis River Watershed & Proximity to Lake Superior

Virginia

NorthMet Mine Location

Duluth

Lake Superior

Minnesotas Center for Environmental Advocacy

Created by: Kyle Temmes, Minnesota Center for Environmental Advocacy Date: October 2022

NorthMet Corporation has proposed a facility referred to as the “NorthMet Project” between Duluth and Rose Lake. The project includes the development of open-pit mines to extract copper, nickel, and other metals. If allowed to proceed, it would be the largest open-pit mine in Minnesota and one of the largest in the state.
Potential Direct Wetland Impacts

- 912.5 acres of wetlands would be destroyed
- 65% of the wetlands are high quality

Photo Credit: Steve Eggers and Jill Bathke

Minnesota Center for Environmental Advocacy
Coniferous Bog: 57%
Shrub Swamp: 12%
Shallow Marsh: 8%
Coniferous Swamp: 9%
Deep Marsh: 8%
Wet Meadow: 4%
Open Bog: 1%
Hardwood Swamp: 1%

Direct Wetland Impacts by Wetland Plant Community
Mitigation For Direct Impacts

- Two of three mitigation sites not in St. Louis River Watershed
- No “in-kind” mitigation for loss of 509 acres of coniferous bog

Photo Credit: Great Lakes Indian Fish and Wildlife Commission
Potential Indirect Wetland Impacts

- Proposed indirect wetlands impacts: 6,498 - 7,350 acres
  - Groundwater drawdown
  - Changes to stream flow
  - Changes to water quality
  - Atmospheric deposition
  - Fragmentation

Image Credit: www.sustainableaggregates.com/
Indirect Wetland Impacts Mitigation

- Extremely limited baseline data
- No mitigation opportunities identified

Unanswered Questions:
- Will comprehensive baseline data be collected before mining impacts occur?
- At what point will regulatory agencies determine that an indirect impact has occurred?
- What triggers the requirement for additional mitigation?
- How long will indirect monitoring last?
Financial Assurance...for Wetlands

- Protects the public against wetland loss due to the failure of a landowner to perform wetland mitigation

Costs for surveys
Project re-design and engineering
Site construction and planting
Monitoring and maintenance
Remedial work and contingencies
Several years of monitoring, site still improving

$\quad$ Mitigation Site Establishment (time)

Construction and planting complete

Some natives established, few invasives

10-15 years monitoring, site meets \textit{all} standards

\textbf{Financial Assurance Release}
For mitigation of mining-related wetland impacts, PolyMet is just one example of a larger problem:
Point 1:
Thousands of acres of high-quality wetlands are threatened by current and proposed mining projects.
Point 2: Sufficient efforts have not been made to avoid or minimize wetland impacts.
Point 3:
Existing mitigation proposals will not replace the functional values of the destroyed wetlands.

Image Credit: Barr Wetland Mitigation Plan Report for PolyMet Draft, 2008
Point 4:
There are valuable mitigation opportunities left in NE Minnesota.

Image Credit: Jill Bathke
Point 5:
The goal of a NE mitigation strategy should be to preserve the functional values of wetlands with the Lake Superior and Rainy River watershed.
Northeast Mining Mitigation

What is not working:

- Low to moderate quality out-of-watershed mitigation
- Few resources to identify higher quality mitigation opportunities
- Limited local government engagement
- Limited public transparency and engagement
- Lack of clear and measurable standards to evaluate success
NE Mitigation Strategy

Recommendations Presented by Interagency Team:

• Wetland mitigation search criteria
• Alternative mitigation options in NE Minnesota
• Replacement wetland siting sequencing
• Other (Rapid Response IRT, inventory of siting analysis, promote private banking)
How can we assess what functions and values a particular wetland provides?

How can we mitigate that loss to the watershed?

Figure 51. Wetland functions and internal and external values.
# Improvements to Mining Mitigation in NE Minnesota

<table>
<thead>
<tr>
<th>How do we involve specialists?</th>
<th>Where/ how are we mitigating?</th>
<th>What has and has not worked?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase BSWR and local review in mining mitigation approval</td>
<td>Joint DNR / BSWR wetland mitigation website</td>
<td>Review and report on all existing mining mitigation</td>
</tr>
</tbody>
</table>

*Are there alternative mitigation options that would fit better in the NE?*

- Umbrella bank development
- Cautious in-watershed in-lieu fee mitigation project development
In-lieu mitigation: a potential option for alternative wetland replacement in NE Minnesota
In-lieu Fee Mitigation

An entity that will destroy a wetland gives a money to an approved in-lieu fee program

Construction an ecologically beneficial aquatic resource project

→ Money is pooled
→ Wetland, stream and buffer
→ Conducted by government agencies or non-profits
Applicant avoids and minimizes impacts to aquatic resources to the greatest extent practicable and requests to mitigate for unavoidable impacts via payment to an approved ILF program.

Applicant pays a one time fee to the ILF sponsor and provides proof of transaction to state/federal entities.

END*

*other permit/ approval /ILF plan conditions may require additional work, does not address non-compliance.
In-lieu Moving Forward

- Across the country, in-lieu fee programs have been in place for many years, with varying success.

- The standard (not a goal):

  **No-net loss of wetland area and function through the funding of ecologically successful projects in the impacted watershed.**
Take Away Thoughts

• Should those proposing large-scale aquatic resource impacts be held to a higher standard?

• Do MN’s laws and policy’s thoroughly protect loss of the functions and values wetlands provide?

• How will we value and protect wetlands in the future and can we be a model across the nation?
If You Want to Talk Wetlands

Jill Bathke
Natural Resource Scientist
jbathke@mncenter.org
651-287-4872

Minnesota Center for Environmental Advocacy
www.mncenter.org
PERCENT OF MINNESOTA COUNTY AREA IN STATE APPROVED WETLAND BANKS

Map created with BSWR's best available data as of December 2013. Recently approved wetland banks may not be included. Calculations exclude project specific replacement sites, such as projects authorized by the MNDNR under a permit to mine. No geographic dataset of project specific replacement sites has been compiled to date.