

New Mining Projects *in Michigan*

Opportunities and Obstacles

By Dennis J. Donohue

Metallic mineral mining historically has been a critical driver in the economic development of Michigan. Commercial metal mining came to the Upper Peninsula in the early 1840s with Douglas Houghton's "discovery"¹ of the famed native copper deposits of the Keweenaw in 1841, followed closely by the discovery of iron ore deposits in Marquette County in 1844.² Copper mining in particular boomed in the UP from 1844 to 1887 and continued intermittently in the Keweenaw and western UP until the 1990s. The last active copper mine in Michigan (the White Pine Mine in Ontonagon County) closed in 1995. Iron mining continues to this day.

Several generations of mining in the western UP have left the region with an infrastructure that can be put to productive reuse for a new generation of mines. Rail lines, utilities, and roads provide opportunities for rehabilitating mills. This long mining history also left a largely pro-mining social and political culture in the region. Over the past decade or so, these considerations, along with advances in exploration and mineral processing techniques, have converged to promote new mining activity. Among the projects now under consideration or moving forward in the UP are the Copperwood, Eagle, and Back Forty³ projects (copper, nickel, or both). There are other projects in various stages of exploration as well.



Miners pose with lunch pails in hand on a pile of waste rock outside of the Tamarack mineshaft in Michigan's Upper Peninsula, 1905.

These projects have their challenges, however. Much of the intensive mining in these areas had ceased completely or largely wound down before many of the environmental protection statutes in existence today were enacted. Consequently, these projects must often contend not only with the residual effects of past operations, but also meet the strictures of intensive new regulatory regimes and social scrutiny focused on preventing adverse environmental impacts.

Political and socioeconomic changes in some of these areas have also influenced the project approval process. Over the past several decades, a recreation- and tourism-based economy has emerged in the western UP, resulting in stakeholders in these areas who can be hostile to mining. Native American tribes have also become much more active in ensuring that regulators—particularly federal regulators—consult with tribes when reviewing these projects.

These factors have created a contentious regulatory and social context that tends to drive certain recurring issues to the forefront of public debate. This article addresses how three such issues have played out in Michigan: addressing the risks of acid rock drainage, managing the conflicting demands of federal and state regulators, and understanding the role Native American tribes play in the project approval process.

Intensified exploration activity in the UP over the past 10–15 years has led to three significant projects currently in various stages of development, with other projects likely to follow in the years ahead. The Back Forty project near the Wisconsin border in Menominee County has been in active (though intermittent) development over the past decade. However, project officials have

Acid rock drainage, state and federal tension, and the potential impact of mining on tribal interests in the region have driven controversy concerning these projects and framed the regulatory response by state and federal agencies.

Acid rock drainage

Non-ferrous metallic mineral mining (mainly copper and nickel) often involves development of ore bodies with high sulfur content. The ore and waste rock from these mines can create an acidic, metallic runoff if they are sufficiently reactive and exposed over time to both air and precipitation. This runoff can harm the environment. Historic mine operations in these ore bodies (mainly in the western United States) have in some cases left a very tangible stigma on the local landscape. However, these sulfide ore mineral deposits in Michigan were not historically mined, so there are no significant legacy impacts related to acid rock drainage in the region. Accordingly, Michigan did not specifically regulate non-ferrous metallic mineral mining per se before 2004, relying on various media-specific permitting programs—such as wetland permitting regulations—to address and prevent potentially harmful environmental impacts from industrial activity. But perceived risks to the unique water resources of the Great Lakes related to acid rock drainage—a major concern to groups opposed to this type of mining—raised the question of whether additional regulation was warranted. Contributing to the drive for additional regulation in Michigan was the fact that Minnesota had adopted a statute specifically regulating such mining in 1993⁴ and Wisconsin enacted a moratorium on non-ferrous mining in 1997.⁵

Michigan responded to these concerns by adopting a statute to specifically address potential acid rock drainage and other issues associated with non-ferrous metallic mineral mining in 2004: Part 632 of the Michigan Natural Resources and Environmental Protection Act.⁶ Part 632 and Michigan Department of Environmental Quality (MDEQ) regulations implementing it were the result of substantial input by mining companies, UP townships affected by new projects, non-governmental organizations concerned about environmental impacts, the EPA, and Native American tribes, among others. Representatives from these groups met with the MDEQ and each other in unique, intensive stakeholder workgroups and meetings to help develop the new regulatory scheme. The resulting statute and regulations—though not unanimously supported by all participating stakeholders—reflect a general consensus on a comprehensive new permitting scheme for these mines. The scheme requires unprecedented public participation in the permit application and review process, including applicant preparation and public review of an environmental impact assessment of the project. Part 632 imposes requirements to ensure that companies utilize modern mining and reclamation methods widely used in the industry to prevent acid rock drainage or control and treat any drainage that does form. Part 632 also imposes financial assurance requirements on

FAST FACTS

Non-ferrous metallic mineral mining is stringently regulated in Michigan.

Navigating potentially duplicative federal and state regulatory requirements is a challenge for new mining projects.

Acknowledging and addressing the role federally recognized Native American tribes can play in the permitting process is an important aspect of project planning.

yet to apply for environmental permits and other authorization needed to build a mine. The Copperwood project in Ontonagon and Gogebic counties has the permits needed to build and operate the mine, but no major construction activities have taken place. The Eagle Mine and associated Humboldt Mill are the farthest along, with permits necessary to build and operate the project and major construction and rehabilitation activities at both the mine and mill sites largely complete. Both the mine and mill are located in northwest Marquette County in the historic Marquette Iron Range area.

mining companies to guarantee that reclamation (and any needed remediation) occurs. To date, the MDEQ has issued three permits under Part 632: one each for the Eagle Mine, the Humboldt Mill, and the Copperwood project.

State-federal tension

The divergent policy goals and priorities of state and federal agencies overseeing mining activity can create substantial obstacles and delays in project development. Perhaps the most high-profile example of this phenomenon at the national level is the EPA's preemptive watershed assessment of the potential impacts of the Pebble Mine in Alaska undertaken and published *before* any permit applications had been submitted.⁷ The complex relationship between state environmental permitting schemes and federal programs that retain certain supervisory authorities over state programs has raised interesting questions of federal authority. Federal regulators appear to be expanding their role in mine project approvals in the upper Great Lakes, including Michigan. One example of this is the U.S. EPA Region 5 (the regional office for the Great Lakes states) review of the Eagle Mine project under the federal Safe Drinking Water Act.

The federal Safe Drinking Water Act Underground Injection Control program is an area in which the federal government (via the U.S. EPA) retains primary permitting authority in many states, including Michigan. The program regulates injections of "fluids"

through "wells" underground to prevent contamination of underground sources of drinking water.⁸ Most wells associated with mining (such as backfill wells) qualify as low-risk "Class V" wells.⁹ Absent an unusual risk to underground sources of drinking water associated with these wells, the EPA authorizes them "by rule,"¹⁰ meaning that mining companies need not apply for and obtain individual Underground Injection Control permits for the wells, and no Endangered Species Act, National Environmental Policy Review Act, National Historic Preservation Act, or other lengthy federal reviews are required before well construction and operation.

However, the EPA took the position that injection of treated wastewater from the Eagle Mine to sand infiltration galleries through buried perforated pipes required an individual Underground Injection Control permit and, therefore, National Historic Preservation Act and Endangered Species Act reviews of the whole project. This was an expansive reading of its individual permit authority since the treated water met federal drinking water standards. The EPA then spent more than two years reviewing the Eagle Underground Injection Control permit application, duplicating the MDEQ's prior review and approval of the discharge under Part 31 of the Natural Resources and Environmental Protection Act.¹¹ Eagle eventually redesigned its discharge to do away with the need for an Underground Injection Control permit, but the episode serves as a clear example of the federal and state authorities at play and how they can impose duplicative (and perhaps conflicting) demands on a project. The level of federal involvement in mining regulation in the upper Great Lakes is likely to continue to develop as more projects move into permitting, particularly in the area of wetland regulation.

Native American tribal consultation

Tribal relations are unique in the upper Great Lakes because of the number of tribes, their geographic proximity to each other, their proximity to proposed projects, and the system of treaties governing their relationship with the federal government and states. There are 12 federally recognized tribes in Michigan, 6 in Minnesota, and 11 in Wisconsin.¹² The majority of the tribes in Michigan are Ojibwe (also known as Chippewa), Potawatomi, and Ottawa, but the Sioux, Menominee, and Oneida tribes, among others, are also represented in the upper Great Lakes.

Four treaties form the primary basis for the relationship between the Ojibwe and the United States in the upper Great Lakes, including Michigan. These treaties were entered into in 1836, 1837, 1842, and 1854. Under the treaties, the Ojibwe ceded large swaths of land to the United States while reserving certain lands for themselves and the right to hunt, fish, and gather on the lands ceded to the United States. Such reserved rights are commonly referred to as "usufruct rights." Generally, usufruct rights apply to public lands and private lands open to the public for hunting, fishing, and gathering. Such rights are nonexclusive and held in common with non-Native Americans.¹³

Over the past 30 years, Ojibwe tribes in the region have vigorously defended their usufruct rights in legal challenges to state



Photo by Johnny Johnson and Mike Kaas, Mining History Association

Michigan's Quincy Mine No. 2. The inclined shaft was 9,200 feet in length (6,400 feet vertical). A water bailing skip in the left shaft compartment was used to remove water from the mine.

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hunting and fishing regulations and to private development on ceded lands. Importantly, these disputes guide and inform the tribes' approach to new mining projects. There are fundamental differences, however, in the way the tribes, the government, and the mining companies view the treaties. For example, the 1842 treaty was commonly called the Miners' Treaty or Copper Treaty by non-Native Americans because its express purpose was to facilitate settlement and encourage mineral development on ceded lands. At the time it entered into the treaty, the tribe also apparently understood that the reserved rights were subject to mineral development on the ceded territory.¹⁴ In fact, one court has found that the Ojibwe's understanding at the time they entered into the treaty was that they would be able to use the ceded land only "until mining commenced."¹⁵ Despite this apparent limit, various Ojibwe bands have relied on the usufruct rights provided by the 1842 treaty as well as other treaties with the United States as a basis to oppose mining projects because of claimed adverse impacts on those "reserved rights."

In addition to articulation and defense of treaty rights, Native American tribes in the region also diligently pursue their right to be consulted on mining projects in cases where the federal government must approve or permit some or all aspects of the mine. This consultation obligation on federal agencies stems from Section 106 of the National Historic Preservation Act,¹⁶ which obligates federal agencies to consult with tribes on the potential impacts a federal undertaking may have on historic properties, including traditional cultural properties. Such properties can encompass features in the landscape, trails, and other natural resources of special cultural or spiritual significance to tribes. If any identified traditional cultural properties potentially impacted by a project meet the criteria to be eligible for listing on the National Register of Historic Places, the federal government must, when possible, make good-faith efforts to mitigate any adverse effects. Certain tribes in the upper Great Lakes have also applied for and obtained Treatment as a State status from the U.S. EPA for administering their own environmental permitting programs, establishing another basis for project proponents to engage with tribes when projects

are located on or impact reservation lands. Tribal participation and engagement in these types of mining projects will undoubtedly develop into a major component of the project review and appeal process.

Conclusion

New mining projects in Michigan and the upper Great Lakes region present exciting opportunities in an area sorely in need of economic growth. And while these projects carry permitting challenges, they are moving forward under robust federal and state oversight that will likely ensure that balance is maintained between development, environmental protection, and sensitivity to the interests of Native Americans impacted by mining. ■



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ENDNOTES

1. Lankton, Keweenaw National Historical Park: Historic Resource Study, available at <<http://www.wuppr.com/pdf/KNHPHisRes.pdf>>. In fact, indigenous people were the first to discover and mine the resource some 6,000 years ago. <<http://www.copperculture.homestead.com>>. All websites cited in this article were accessed May 6, 2014.
2. Stiffler, *The Iron Riches of Michigan's Upper Peninsula* <http://www.michigan.gov/dnr/0,4570,7-153-54463_18670_18793-53100-,00.html>.
3. The author's firm has done work on both the Eagle and Back Forty projects on behalf of the project proponents.
4. Minn Stat §§ 93.44.51.
5. Wis Stat § 293.50.
6. MCL 324.63201 *et seq.*
7. See EPA, *An Assessment of Potential Mining Impacts on Salmon Ecosystems in Bristol Bay, Alaska*, EPA 910-R-14-001A-C. Non-governmental organizations and others concerned about mining have asked the EPA to do a similar type of impact assessment for the Lake Superior Watershed. See December 16, 2013 correspondence from Bad River Watershed Association *et al.* to Region 5 Administrator Susan Hedman.
8. 40 CFR § 144.1.
9. 40 CFR § 144.6. Certain wells used for in situ mineral extraction qualify as "Class III" wells.
10. 40 CFR § 144.24.
11. MCL 324.3101 *et seq.* Unlike the federal Safe Drinking Water Act, Part 31's permitting criteria actually go beyond protection of underground drinking water sources to encompass protection of groundwater and surface water from ecological impacts, making Part 31 more comprehensive in scope and more stringent in terms of permitting standards and criteria.
12. See 77 Fed Reg 47868.
13. *Id.*
14. E.g., *Sokaogon Chippewa Comm v Exxon Corp*, 805 F Supp 680, 686–687 (ED Wis, 1992).
15. *Id.*
16. 16 USC 470 *et seq.*