



Protecting the Common Waters of the Great Lakes Basin
Through Public Trust Solutions

February 2, 2018

Ms. Kristina Wilson
Environmental Quality Analyst
Michigan Department of Environmental Quality
Upper Peninsula District Office
1504 West Washington Street
Marquette, MI 49855

VIA ELECTRONIC SUBMISSION

RE: Wetlands, Lakes and Streams Application Submitted by Aquila Resources, Inc.
Back 40 Open Pit Sulfide Mine

Dear Ms. Wilson,

For Love of Water (“FLOW”) submits the following comments in opposition to the issuance of a Part 303 permit under the Natural Resources and Environmental Protection Act (“NREPA”) for the above-referenced activity. The proposed project and permit are inconsistent with the standards of Part 303 and conflict with the requirements of Part 17, the Michigan Environmental Protection Act (“MEPA”), and the Michigan Department of Environmental Quality (“DEQ”) cannot lawfully issue the permit.

At the outset, we note that the impact of the proposed activity is of an extent that places it among the larger wetland destruction proposals annually submitted to the DEQ. The direct impact on 11.22 acres and indirect impact on 17.17 acres is large in scope. Further, the indirect impact on 13.01 acres of forested wetland is of special concern. According to a DEQ study, more than 29,000 acres of forested wetland in Michigan were lost between 1978 and 2005.¹ Restoring forested wetland is a difficult and long-term proposition. A National Oceanic and Atmospheric Administration study noted 77 square miles of forest lost to development in the Lake Michigan watershed between 1985 and 2010. Only 12% of the watershed is forested wetland.²

¹ Michigan Department of Environmental Quality, “Status and Trends of Michigan’s Wetlands: Pre-European Settlement to 2005,” https://www.michigan.gov/documents/deq/wrd-wetlands-status-trends_556006_7.pdf

² NOAA Coastal Services Center, “Lake Michigan Basin: Land Cover Change Report, 1985-2010,” <https://coast.noaa.gov/data/digitalcoast/pdf/landcover-report-lake-michigan.pdf>

Part 303 of NREPA clearly states that the proposed activity cannot be permitted unless the activity is primarily dependent upon being located in the affected wetland *and* that a feasible and prudent alternative does not exist. MCL 324.30311(4)(a)-(b). Mining per se is not a wetland dependent activity. As to the feasible and prudent alternative analysis, the applicant did not sufficiently examine alternatives that demonstrate other off-site or on-site configurations, size, extent, costs, or wetland impacts are not feasible and prudent as required by law under sections 324.30311(4)(b) and 324.30311(5). The alternatives analysis prepared for the applicant acknowledges that Alternative A, the underground-mining only concept, significantly reduces the impact of the preferred project design by avoiding large surface excavation associated with an open pit and by reducing stockpile space requirements for topsoil and overburden. The applicant rejects Alternative A because it does not meet “economic viability criteria.” Table 4-1 says simply “ore body inaccessible” through Alternative A, yet the narrative says “a large portion of the primary ore body would be inaccessible.” Has the DEQ submitted the applicant’s analysis to an independent expert able to determine the accuracy of the economic viability analysis of Alternative A? Further, “economic viability” is not sufficient grounds for rejecting a feasible and prudent alternative. It is not the State’s obligation to assure the economic viability of a proposed use of wetlands. The applicant took that risk in securing rights to the mining site.

The applicant must also comply with MEPA’s feasible and prudent alternative standard, and a review of the application similarly reveals that there is a lack of sufficient consideration of all likely environmental impacts and effects and feasible and prudent alternatives. MCL 324.1701 *et seq*; *State Hwy Comm’n v Vanderkloot*, 392 Mich 159; 220 NW2d 416 (1974).

The DEQ asserts that “It has been determined that the entirety of the Back Forty project area is outside of (elevated above) the 100-year floodplain of the Menominee River, with the exception of a proposed 15-inch diameter storm water outfall pipe, and associated riprap slope protection next to the pipe,” and that therefore there will be no impacts in flood conditions. Climate change is already altering flood extent and frequency. An analysis conducted for the Natural Resources Defense Council found that “the annual frequency of Michigan storms of two inches or more of precipitation in a single day has increased by 89% between 1964 and 2013.”³ Extreme rain events in excess of the 500-year flooding are occurring with greater frequency in the Great Lakes. Accordingly, the DEQ’s determination of the 100-year floodplain fails to acknowledge and adapt to these changing conditions.

In addition, the likelihood of harm both to the wetland and Menominee River is high. DEQ cannot lawfully issue a permit for the proposed activity without weighing the “extent and permanence of the beneficial or detrimental effects that the proposed activity may have on the public and private uses to which the area is suited, including the benefits the wetland provides.” MCL 324.30311(2)(c). Such statewide conservation benefits and criteria for the DEQ to consider are clearly articulated in the Act’s legislative findings section, which include flood and

³ Natural Resources Defense Council, Rocky Mountain Climate Organization, “Extreme Storms in Michigan,” https://www.nrdc.org/sites/default/files/glo_14120301a.pdf

storm control, wildlife habitat, protection of subsurface water resources, pollution treatment, erosion control, nutrient sources in water food cycles, agricultural resources. MCL 324.30302.

The applicant's submitted Environmental Impact Statement documents sulfide minerals with little buffering material, raising the risk of acid drainage and harm to the biota in the wetland and river. Moreover, the applicant provides insufficient data to evaluate and determine the likely impact or harm to wildlife, endangered or threatened species, and their habitat. Acid drainage at mining sites across the nation has resulted in toxic effects that last decades.⁴ In addition, the Menominee River is already classified as an international Area of Concern ("AOC") under the Great Lakes Water Quality Agreement in part due to heavy metal contamination from legacy industrial activities. Thanks to the Great Lakes Restoration Initiative, this multi-million dollar federal investment continues to fund the active and ongoing remediation of the Menominee River. The U.S. Environmental Protection Agency notes, "Heavy metals can be leached from rocks that come in contact with the acid, a process that may be substantially enhanced by bacterial action. The resulting fluids may be highly toxic and, when mixed with groundwater, surface water and soil, may have harmful effects on humans, animals and plants."⁵ Severe documented impacts to flora and fauna include the bioaccumulation of toxic metals (including copper, cadmium, arsenic, lead, and mercury) in aquatic fish and wildlife. The time span in terms of both restoration of wetlands destroyed or otherwise impacted by the mining operations and acid mine drainage is significantly greater than the 8-year life of the mine contemplated by the applicant.

The applicant's hydrogeological water and soils studies also are insufficient to conclude that there will be no significant impact to wetland levels, groundwater, or the river. There are insufficient boring and monitoring wells in wetlands, groundwater, and stream flow and flow monitoring. Moreover, there are insufficient "fence diagrams" showing that wetlands and mining, and dewatering, are not connected to groundwater and/or seeps, creeks, river.

The application and consultant's report are strewn with assertions not supported by evident facts and data. Because of this, any monitoring of the project's impact on air and water quality and habitat should be funded by the applicant but conducted by an independent third party with transparent reporting to both the agency and the public via an accessible medium such as a website.

The proposed mitigation involves preservation, not creation of wetlands, river frontage and tributary stream channels 19 miles from the project site, instead of restoration or creation of wetlands closer to the site. It is not clear from the consultant's report what share of the wetlands to be preserved are forested wetlands, a significant acreage of which will be indirectly impacted

⁴ Johnson, D. Barrie and Hallberg, Kevin B., "Acid mine drainage options: A Review," Science of the Total Environment, 338 (2005) 3-14, https://content.sph.harvard.edu/mining/files/Acid_mine_drainage_remediation_options_-_a_review_JOHNSON_20.pdf

⁵ U.S. Environmental Protection Agency, "Abandoned Mine Drainage," <https://www.epa.gov/nps/abandoned-mine-drainage>

at the project site. We urge a hard look at the mitigation analysis and the requirement of sites closer to and of the same kind as wetlands to be impacted. Finally, other tools exist to preserve the proposed mitigation wetlands, including the Michigan Natural Resources Trust Fund.

Tens of thousands of public and private dollars are being spent to return Lake Sturgeon to the whole Menominee River system. The two lower dams in the river are under renovation to pass sturgeon upstream; other studies have been funded to show that when given opportunity to move up to historic spawning sites fish from lower down will do so. The problem remains that adult Lake Sturgeon drop back down over dams as do many younger fish, so upper river stocks are small and can't be replenished easily should some waste kill the few fish that remain in upper sections where a possible breach or discharge may impact the fish. If the river was entirely free flowing, a spill of some sort might wash out easily, but with these dams, even with fish passage, spilled materials will take longer to move through and out and could impact all fishes in the system.

Finally, we note that burial sites and mounds sacred to the Menominee Tribe of Wisconsin are located within the footprint of the proposed mine. This should be considered in the DEQ's determination whether the issuance of the permit is in the public interest pursuant to Part 303. Respect for affected sovereign nations is a fundamental precept of ethical government policy. The Tribe does not accept the applicant's assurances regarding treatment of human remains and artifacts. Tribal concerns should weigh heavily in your decision-making, and in this case part of the public interest to be assessed.

Thank you for the opportunity to comment.

Sincerely,



Liz Kirkwood
Executive Director

CC: Heidi Grether, Director, Michigan Department of Environmental Quality