

Attachment A

**Preapplication Notification Information
Pursuant to s. 295.465(2), Wis. Stats.**

March 10, 2014

Environmental Impact Report Outline

This document contains recommendations on the information and formats that may be required by the department to aid the agency in the preparation of an Environmental Impact Statement (EIS). The information specified in this document supplements the information contained in the letter dated March 10, 2014 from Larry Lynch, DNR, to Tim Myers, Gogebic Taconite, LLC. Requirements may change as the applicant provides more information or makes modifications to the proposed project.

EIR Outline

1. Proposed project description.

Provide a complete description of the proposed project.

1.1. Applicant.

Identify the corporate entity or entities that would own and/or operate the facility.

1.2. Purpose and need.

Describe the purpose and need for the project.

1.3. Authorities and Approvals Needed.

Provide a list of required approvals from the following regulatory bodies listing the approvals required for all project-related activities and sites. Include the status of each approval application, filing date of permit or approval application, permitting agency, contact name, E-mail address and telephone number.

1.3.1. Wisconsin Department of Natural Resources.

1.3.2. Other Wisconsin state agencies.

1.3.3. Local.

1.3.4. Federal.

1.3.5. Tribal.

1.4. Project sites and ore body information.

1.4.1. Location.

Identify, describe and map the location of the proposed mine project and all ancillary facilities within the state, region and local area. Provide latitude and longitude coordinates as well as by Town, Range, Section and ¼, ¼ section.

Describe the location of the ore body. Include maps and diagrams.

1.4.2. Description and dimensions.

Provide detailed descriptions and drawings of the mine project boundaries, and major phases and components.

Provide a detailed description of the mine site geology and ore body. Provide detailed descriptions and drawings of all ancillary facility properties.

1.4.3. Ownership of properties and operations.

Include current land ownership and any activities or plans for temporary or permanent acquisition of lands or rights-of-way from landowners. Include plat maps indicating proposed acquisitions. State whether or not the applicant has an option to purchase for each site under review.

1.4.4. History.

Describe the history of use for all the project site and lands in the area of potential impact.

Describe any uses that could have resulted in site contamination (petrochemical storage, fertilizer or pesticide use, *etc.*) and any remediation conducted on the site.

1.4.5. Maps.

Provide maps showing the location of all proposed sites and facilities that clearly indicates their location in relation to major geographic features (such as highways, nearby municipalities, nearest major cities, lake or large river) so that locations are easily identifiable. Provide additional maps (if necessary) showing proposed location of any connecting facilities (*e.g.* electric transmission lines, natural gas pipelines, steam lines, roads, railroads, rail to ship transfer locations).

1.4.5.1. Location within state.

1.4.5.2. Location within region or county.

1.4.5.3. Site boundaries and layout on USGS Topo Quad.

1.4.5.4. Site boundaries on aerial ortho-photo quad.

1.4.5.5. Site boundaries on plat maps.

1.4.6. Photographs.

1.4.6.1. Oblique aerial views of sites.

Provide oblique aerial photographs of all related project sites.

1.4.6.2. Views of the sites.

Provide photographs of all related project sites taken from public vantage points, including: public roads, trails, waterways, overlooks, *etc.*

1.4.7. Zoning and land use.

Describe current zoning and land uses in the vicinity of the project.

Provide copies of any zoning ordinances affecting the project site and the area of potential impacts (provide only page(s) directly citing ordinance language).

Describe zoning and land use changes needed for the project. Describe zoning and land use changes that the applicant has requested of local government for the proposed project. Report the name of the entities responsible for zoning changes, the process required to make a zoning change and the outcome or expected outcome for those changes.

1.4.8. Mine site development and operation.

1.4.8.1. General description.

Describe the facilities and operations proposed. Include an estimate of the expected commercial life span for the mine and facilities, and the expected date of reclamation and closure. Describe proposed measures to reclaim and close the mine site, and long-term site use and management.

1.4.8.2. Mining project and process details.

Include descriptions of methods, schedule and hours of operation, equipment and materials. Also include maps, diagrams and photographic simulations.

1.4.8.2.1. Phasing.

Provide a detailed description of all major project phases.

1.4.8.2.2. Access.

1.4.8.2.2.1. Public roads.

Describe any permanent changes required to existing roads, traffic signals, *etc.*, needed for the project. Include maps and diagrams.

1.4.8.2.2.2. Haul roads.

Describe all needed haul roads and driveways for all project phases at all project-related sites. Include a description of any needed waterway crossings. Identify waterways, and crossing locations, methods, equipment, and schedules.

1.4.8.2.2.3. Rail.

Describe any required permanent changes to railroads as a result of this project.

1.4.8.2.3. Clearing and grubbing.

Describe all clearing and grubbing operations at all project-related sites. Include a description of how cleared timber and other woody vegetation will be managed.

1.4.8.2.4. Overburden management.

Describe overburden removal, segregation, and storage pile stabilization and locations.

1.4.8.2.5. Ore excavation.

Provide descriptions of blasting and mechanical excavation operations. Include a description of equipment to be used and potential and planned equipment sources.

1.4.8.2.6. Ore processing.

Provide descriptions of ore processing operations. Include a description of equipment to be used and potential and planned equipment sources.

1.4.8.2.7. Tailings handling.

Describe, locate and map tailings storage areas, methods and equipment. Describe tailings conveyance methods and handling at the waste storage area.

1.4.8.2.8. Waste rock storage.

Summarize waste characterization work. Describe, locate and map all waste rock storage areas, methods and equipment.

1.4.8.2.9. Transport.

Describe the use of highways and railroads for equipment, ore or other product shipment, including schedules. Include a description of the transportation equipment to be used and potential and planned equipment sources.

Include descriptions of highway and railroad routes to and from markets.

1.4.8.2.10. Equipment staging and storage areas.

Describe and map the locations for storage lots and facilities during all phases of the project.

1.4.8.2.11. Operations control center.

Describe the operational control center and office facilities needed for the proposed mine. Include a map and diagrams.

1.4.8.3. Water sources and use.

Identify and fully describe all sources of water required for the project. Include descriptions, maps and diagrams for all facilities that will require a water source(s) and what the water source(s) will be.

Report the expected water volume usage in daily, monthly, and annual averages for all facilities. Report total consumptive use/net loss of water from water sources.

1.4.8.3.1. Wells.

Describe, locate and map all existing and proposed wells. Include the location, depth, capacity and use or intended use. Include groundwater modeling of well operations.

Provide maps and analysis for the distance from proposed wells to springs and surface water resources.

1.4.8.3.1.1. Industrial wells.

1.4.8.3.1.2. Domestic wells.

1.4.8.3.1.3. Groundwater Monitoring Wells

1.4.8.3.2. Municipal water sources.

Describe the intended use of municipal water. Identify any intended municipal operating water utility. Identify the location and capacity of the municipal supply wells. Describe the methods for delivering water to plant sites, including (if applicable) pipeline diameters, lengths, and routes. Provide maps and information identifying affected natural resources and property owners along proposed water supply pipeline routes. Identify the entity or entities constructing, operating and owning the pipelines.

1.4.8.3.3. Surface water sources.

Identify all intended surface water sources and proposed diversion volumes, schedules and uses. Provide descriptions, maps and diagrams of all surface water intake sites and structures. Describe the method for delivering water to plant sites, including (if

applicable) pipeline diameters, lengths, and routes. Provide maps and information identifying affected natural resources and property owners along proposed water supply pipeline routes. Identify the entity or entities constructing, operating and owning the pipelines.

1.4.8.3.4. Wastewater management.

1.4.8.3.4.1. Industrial wastewater.

Provide descriptions, specifications, maps and diagrams of all industrial wastewater facilities.

Provide descriptions, maps and diagrams of all locations, construction methods, facilities and discharge structures for all wastewater systems extending into any surface water body, draining to the groundwater, or connecting to any municipal wastewater system. Include a complete list of affected waterways, and a description of environmental conditions and resources at discharge locations.

Report industrial wastewater effluent qualities.

Report the expected temperature of discharge water at the discharge point and variation within the mixing zone for any surface water discharges. Report the expected variation in temperature and volume on a yearly basis.

Report water volume discharge in daily, monthly, and annual averages. Provide estimates of the average, maximum and minimum daily flows in cubic feet per second.

If discharging to local municipalities, identify municipalities, and describe and provide copies of any agreements regarding quantity and quality of discharge water to be treated.

1.4.8.3.4.2. Domestic wastewater.

Provide descriptions, specifications, maps and diagrams of all locations, construction methods, facilities and discharge structures for all domestic wastewater systems. Also describe domestic wastewater system operations and effluent quantities and quality.

1.4.8.3.5. Storm water management.

Summarize the storm water management plan.

Provide descriptions, maps and diagrams of all storm water system component locations, construction methods, facilities, discharge structures, and receiving waterways.

Report storm water discharge volumes and quality.

1.4.8.3.6. Solid and hazardous waste and materials management.

Summarize waste characterization work.

Identify the composition and quantity of all solid and hazardous waste and materials that would be produced or used as a result of all project construction and operation activities.

Provide descriptions, maps and diagrams of all solid and hazardous waste and materials system component locations, construction methods, facilities, disposal structures and disposal locations.

Discuss the potential and intent for use or reuse of solid and hazardous waste materials.

1.4.8.3.7. Fugitive dust control.

Summarize the dust control plan that addresses particulate emissions from all potential sources at all project-related sites during all phases of the project.

1.4.8.3.8. Noise control.

Identify and quantify all sources of noise related to mine construction, operation, and reclamation. Describe measures to control noise at all project-related sites during all phases of the project.

1.4.8.3.9. Lighting.

Describe lighting facilities and schedules needed for mine construction and operation. Describe measures to control light pollution at all project-related sites during all phases of the project.

1.4.8.3.10. Visual screening.

Provide descriptions, maps, diagrams and photographic simulations of plantings, berms or other measures to screen or limit the visibility at all project-related sites during all phases of the project.

1.4.8.3.11. Safety and security.

1.4.8.3.11.1. Exclusionary fencing.

Describe the use of security fencing at all project sites.

1.4.8.3.11.2. Security personnel and operations.

Describe all security operations and positions.

1.4.8.3.11.3. Hazardous materials and spills management.

Provide a list of all hazardous materials to be used on site during construction and operation (including liquid fuel), as well as spill containment and cleanup measures.

Discuss Spill Prevention, Control and Countermeasure (SPCC) and Risk Management planning for the chemicals used.

1.4.8.3.11.4. Blasting safety measures.

Describe blasting operation safety procedures for mine site employees and the public.

1.4.8.4. Ancillary facilities development.

Include descriptions, maps, diagrams and photographic simulations. Identify size and location of all facilities. Describe the expected use of these areas after project completion, and plans for post-construction site restoration.

1.4.8.4.1. Transportation.

1.4.8.4.1.1. Roads.

Describe the types of vehicles that will visit and be used at the mine site during construction and operation. Include vehicles used by workers arriving at and departing the site.

Describe and map how construction traffic will enter and leave the mine site.

Give an estimate of traffic frequency and volume during construction and operation. Include access traffic by workers, equipment and supply deliveries, and equipment.

Describe and map probable routes for delivery of heavy and oversized plant equipment and material loads. Identify the condition and load ratings for the identified roads. Discuss how heavy loads or large loads will be handled.

1.4.8.4.1.2. Rail.

Describe any new rail lines, changes in existing rail line usage, and needed changes to rail systems.

Include maps and diagrams.

1.4.8.4.2. Energy.

Identify energy sources and facilities required for construction and operation of all project components and phases. Include the quantity of energy required from each source.

1.4.8.4.2.1. Natural gas pipelines.

Describe the need for and use of natural gas.

Provide a general description of the natural gas pipeline facilities required for full operation of the proposed project. Include maps and diagrams. Identify natural gas pipeline end points, length, diameter, and volume requirements. Include maps and diagrams. If it is determined during the pre-application phase that a gas pipeline application is required, refer to: Public Service Commission (PSC) Application Filing Requirements for Natural Gas Pipeline Construction Projects.

1.4.8.4.2.2. Electric transmission and distribution lines.

Provide the completed transmission interconnection study report from the transmission provider, including any needed transmission system improvements.

Provide a general description of the transmission line facilities required for full operation of the proposed project. Include maps and diagrams. Identify transmission line end points, length of line, voltage, and substation and/or switching station requirements. Include maps and diagrams. If it is determined during the pre-application phase that a transmission application is required, refer to: PSC Application Filing Requirements for Electric Transmission Construction Projects, Part 2.00.

1.4.8.4.2.3. Petroleum fuels.

Describe and quantify petroleum fuels to be used, including fuel oil, kerosene, gasoline, diesel fuel, etc. Describe the means of transport of fuel to the site, fuel storage facilities and vehicle fueling facilities.

1.4.8.4.3. Other ancillary developments.

1.4.8.5. Monitoring plans.

Summarize the environmental monitoring plan for the project. Provide descriptions, maps and diagrams of all environmental monitoring measures and devices to be employed at the mine site. Describe monitoring operations and schedules.

1.4.8.6. Reclamation and closure plan.

1.4.8.6.1. Bonding.

Describe any financial bonding measures required.

1.4.8.6.2. Closure of project phases.

Describe in detail the reclamation and closure of each project phase.

Include diagrams and photographic simulations.

1.4.8.6.3. Final project closure.

Describe in detail the final reclamation and closure of the mine site.

Include diagrams and photographic simulations.

1.4.8.6.4. Long-term site use, ownership and management.

Describe in detail the long-term use, ownership and management of the mine site.

1.4.8.7. Schedule and hours of operations.

Provide an estimated schedule for construction. Include a timeline showing construction activities from beginning of construction to operation including a breakdown by facility and major phase and component.

Estimate the expected hours of operation.

1.4.8.8. Workforce.

Describe the size, skills, remunerations and likely sources for the workforce required for facility construction and operation.

1.4.8.9. Costs.

Provide a detailed list and summary of all capital costs of the mine and all related sites and facilities. Include financing schedules, annualized values, and net present values.

1.4.8.9.1. Facilities costs.

Provide real estate cost estimates for all project-related sites.

Provide equipment cost estimates for all project-related construction and operation.

1.4.8.9.2. Lease arrangements.

Provide all terms and conditions for any lease arrangements.

1.4.8.9.3. Employment costs.

Provide employment cost estimates for all project related construction and operation. Summarize costs by category, including payments made directly to employees and overhead associated with employees (e.g., payments into workers compensation accounts).

1.4.8.9.4. Comparative costs of alternatives (from section 3).

Provide a summary table and summary discussion comparing the costs of alternatives.

2. Affected environment and environmental consequences.

Address current conditions and consequences of the project for each resource at the regional and facility site scales. Develop a list of all facilities and address impacts from each facility for each resource area. Describe and summarize the direct, secondary and cumulative impacts for each resource. Include descriptions of information used, sources of information, analytical methods, maps, diagrams and photographs.

2.1. Natural environment.

2.1.1. Air quality.

2.1.1.1. Ambient conditions.

Provide background ambient levels for criteria pollutants in micrograms per cubic meter at all project-related sites.

2.1.1.2. Air permits and regulatory requirements.

List the air permits required for the project, and describe the air quality analyses completed in support of the permit applications. This should include, but is not limited to the following:

- 2.1.1.2.1.** Identification of all potential emissions units, including: description, expected emissions, calculations, applicable regulations, date of construction, and controls.
- 2.1.1.2.2.** All analyses required under ch. NR 405, Wis. Adm. Code, and all necessary information as required under s. NR 405.12(1), Wis. Adm. Code, to include, but not limited to control technology review, source impact analysis, additional impact analysis, and Prevention of Significant Deterioration Class I analysis.
- 2.1.1.2.3.** Any determination required under s. NR 424.03, Wis. Adm. Code.
- 2.1.1.2.4.** Any ambient air quality or emission control determination required under ch. NR 445, Wis. Adm. Code.
- 2.1.1.2.5.** Any emission control determination required under s. NR 446.03(2)(a), Wis. Adm. Code.

2.1.1.3. Human Health Risk Assessment

Describe the methodologies, assumptions, uncertainties and results of the human health risk assessment.

2.1.1.4. Fugitive Dust Control

Describe the fugitive dust control plan for all project-related sites during all phases of the project.

2.1.1.5. Mercury Emissions and Deposition

Describe potential mercury emissions related to project facilities and the fate of such emissions.

2.1.2. Topography.

For each facility or feature of the project, describe the general topography of the site and surrounding area.

Describe expected changes to site topography at the various project stages, and at closure.

2.1.3. Soils.

Identify and describe the properties of each soil type on each site.

Discuss the expected impacts on soils, including volume or tonnage to be excavated.

2.1.4. Hydrology.

2.1.4.1. Waterways.

Identify, map and describe all lakes, flowages, ponds, springs, rivers and streams in the area of potential impacts. In addition, include all downstream waterways that may be affected. Include maps of watershed boundaries.

Indicate which waterways would be considered navigable waters of the state under Chapter 30. Indicate which waterways have special designations as Outstanding Resource Waters (ORW), Exceptional Resource Waters (ERW) and/or tribal waterway designations.

Provide water quality data for all potentially affected waterways.

2.1.4.1.1. Effects on waterways.

2.1.4.1.1.1. Direct effects on waterways.

Identify all waterways that would be dredged, filled, crossed, discharged to, or otherwise directly physically affected by proposed activities.

Describe the direct effects of these activities on those waterways.

2.1.4.1.1.2. Secondary effects on waterways.

Identify all waterways that may be indirectly impacted due to surface or groundwater flow changes, erosion, sedimentation, or deposition resulting from proposed activities.

Describe the indirect physical impacts to bed, banks, and water quantity, quality and temperature.

2.1.4.1.1.3. Cumulative effects on waterways.

Identify other existing and potential activities in the project area that may affect waterways.

Describe cumulative impacts to potentially affected waterways from all activities.

2.1.4.1.1.4. Waterway impact minimization.

Describe how surface waters were factored into the site selection process and the alternatives considered that would not result in significant waterway impacts or would result in less significant waterway impacts.

Describe how the project could be modified to reduce or eliminate potential direct, secondary and cumulative effects on surface waters. Modifications to the proposed project could include site or operational modification, route changes (for linear facilities – roads, rail roads, transmission lines and pipelines), and construction schedules and practices.

2.1.4.1.1.5. Measures to Reduce Waterway Impacts.

Describe the measures proposed to address waterway impacts. Provide maps that show the location for each proposed measure site, a detailed description of existing land-use, planned activities, planned monitoring, and future land protection mechanisms. Include measures proposed under s. 295.605(4)(b), Stats.

2.1.4.2. Wetlands.

Summarize wetland identification methods and results.

2.1.4.2.1. Wetland maps.

Include original Wisconsin Wetland Inventory (WWI) maps showing locations of all project sites and connecting facilities without obscuring map details.

2.1.4.2.2. Wetland descriptions.

Summarize the affected wetlands using the Wisconsin Wetland Inventory (WWI) classification, and plant community type (such as shallow open water, deep marsh, shallow marsh, seasonally flooded basin, bog, floodplain forest, alder thicket, sedge meadow, coniferous swamp, calcareous fen, wet meadow shrub-carr, low prairie, hardwood swamp). Describe vegetative dominance.

List the presence or absence of invasive species in wetlands noting whether they are dominant.

2.1.4.2.3. Wetland functional values.

Provide an analysis of wetland functional values. Describe the methodologies used for wetland functional value assessment.

2.1.4.2.4. Effects on wetlands.

2.1.4.2.4.1. Direct effects on wetlands.

Identify all wetlands that would be dredged, filled, drained or otherwise directly affected by project-related activities.

Describe the direct impacts to wetlands and wetland functional values from these activities.

2.1.4.2.4.2. Secondary effects on wetlands.

Identify all wetlands that may be indirectly impacted due to flow changes, erosion, groundwater drawdown, sedimentation, or deposition resulting from proposed activities.

Describe the indirect physical impacts to wetlands and wetland functional values.

2.1.4.2.4.3. Cumulative effects on wetlands.

Identify other existing and potential activities that may affect wetlands.

Describe cumulative impacts to potentially affected wetlands from all activities.

2.1.4.2.5. Wetland impact avoidance and minimization.

Describe how wetlands were factored into the site selection process and the alternatives considered to avoid and minimize wetland impacts.

Describe how the project could be modified to reduce or eliminate potential direct, secondary and cumulative effects on wetlands. Modifications to the proposed project could include site or operational modification, route changes (for linear facilities – roads, rail roads, transmission lines and pipelines), and construction schedules and practices.

2.1.4.2.6. Wetland compensatory mitigation.

Describe the compensation program for wetland impacts. Provide maps that show the location for each compensation site, a detailed description of existing land-use, planned activities, planned monitoring, and future land protection measures.

2.1.5. Floodplains.

Identify, describe, locate and provide maps for all mapped flood plains on all project-related sites and in the area of the proposed mine.

Describe and map any changes to flood plains resulting from the proposed project.

2.1.6. Groundwater.

2.1.6.1. Quantity.

Provide a thorough assessment of groundwater resources in the vicinity of the project site and a characterization of the relationship of local groundwater systems with regional groundwater systems. Summarize the results of the hydrogeologic modeling and analysis. Describe flow direction, recharge and discharge areas, and expected impacts and changes due to project activities. Describe the potential direct, secondary and cumulative impacts to residential, commercial and municipal wells that may be affected for all project sites. Provide mitigation/compensation plans in the event impacts to residential, commercial or municipal wells would likely occur.

2.1.6.2. Quality.

Summarize existing quality of groundwater in the area. Describe expected impacts to groundwater quality due to project activities during all phases of the project.

2.1.7. Flora.

For each project site and area of potential impacts list, locate, map and describe the aquatic and terrestrial vegetation communities known to occur and observed during site visits. Describe the methodologies used for various surveys.

Information provided should be adequate to accurately characterize the habitat quality of each site.

Describe expected short- and long-term direct, secondary and cumulative impacts to aquatic and terrestrial plant habitats and populations for each project site.

Describe how the project could be modified to reduce or eliminate any potential effect on plants. Modifications to the proposed project could include site modification, route changes (for linear facilities – roads, rail roads, transmission lines and pipelines), and construction schedules and practices.

2.1.7.1. Terrestrial.

2.1.7.2. Aquatic.

2.1.7.3. Rare, Endangered, Threatened and Special Concern resources.

Provide a summary of the endangered resources review using the Wisconsin Natural Heritage Inventory for all project-related sites. The review should be submitted as a confidential document under a separate cover. The review should include state or federally listed threatened or endangered plant species, Wisconsin species of special concern, and natural communities within the area of disturbance including temporary or new permanent access routes for each site and the area of potential impacts.

Include a map indicating the location of identified resources relative to the construction and operational footprint of each alternative, including temporary and new permanent access routes.

Discuss the potential for direct, secondary and cumulative impacts to endangered, threatened, and special concern plant species and communities relating to the construction and operation of all project sites and facilities. Discuss the potential for direct, secondary and cumulative impacts to species of greatest conservation need. Describe the potential impacts based on existing habitat conditions and project actions during construction and operation.

Describe how the project could be modified to reduce or eliminate any potential effect on NHI-identified plant resources. Modifications to the proposed project could include site modification, route changes (for linear facilities – roads, rail roads, transmission lines and pipelines), and construction schedules and practices.

2.1.8. Fauna.

For the proposed mining site and within the area of potential impacts, list, locate, describe and map the aquatic and terrestrial animal species and communities known to occur and observed during site visits. Describe the methodologies used for various surveys.

Information provided should be adequate to accurately characterize the habitat quality of the proposed mining site and area of potential impacts.

Describe expected short- and long-term direct, secondary and cumulative impacts to aquatic and terrestrial animal habitats and populations for each project site including impacts to travel corridors, nesting habitat, roosting habitat, and feeding habitat.

Describe how the project could be modified to reduce or eliminate any potential effect on animals. Modifications to the proposed project could include site modification, route changes (for linear facilities – roads, rail roads, transmission lines and pipelines), and construction schedules and practices.

2.1.8.1. Terrestrial.

2.1.8.2. Aquatic.

2.1.8.3. Rare, Endangered, Threatened and Special Concern resources.

Provide a summary of the endangered resources review using the Wisconsin Natural Heritage Inventory for all project-related sites. The review should be submitted as a confidential document under a separate cover. The review should include state or federally listed threatened or endangered plant species, Wisconsin species of special concern, and natural communities within the areas of disturbance including temporary or new permanent access routes for each site and within the area of potential impacts.

Include a map indicating the location of identified resources relative to the construction and operational footprint of each alternative, including temporary and new permanent access routes.

Discuss the potential for direct, secondary and cumulative impacts to endangered, threatened, and special concern plant species and communities relating to the construction and operation of all project sites and facilities. Discuss the potential for direct, secondary and cumulative impacts to species of greatest conservation need. Describe the potential impacts based on existing habitat conditions and project actions during construction and operation.

Describe how the project could be modified to reduce or eliminate any potential effect on NHI-identified plant resources. Modifications to the proposed project could include site modification, route changes (for linear facilities – roads, rail roads, transmission lines and pipelines), and construction schedules and practices.

2.2. Socioeconomic environment.

2.2.1. Demographics.

Provide descriptions of current conditions and trends in the area of the proposed mine site and within the area of potential impacts, including portions of Michigan as appropriate. Include the county or counties in which the mine will be located, the contiguous counties, and statewide. Include maps, tables and diagrams.

Estimate the direct, secondary and cumulative short- and long-term economic effects of the proposed mine on area demographics, including minority and low-income populations.

2.2.1.1. Population.

2.2.1.2. Racial and ethnic composition.

2.2.1.3. Income levels.

2.2.1.4. Communities.

Provide descriptions of potentially affected communities including the labor market, (education, consistent with jobs at project, employment levels during different phases, shutdowns, local versus outside workers). Discuss current and projected tax payments – income, property and net proceeds.

Describe and map communities and other population centers that will be affected by the proposed project.

2.2.2. Economy and employment.

Describe the economic conditions and trends in the area of the proposed mine such as sectors, labor participation, commercial activity, and related issues.

Estimate the direct, secondary and cumulative short- and long-term economic effects of the proposed mine, including any costs or benefits to the area community (*e.g.* employment, reduced production costs, goodwill gestures). For employment at the mine provide detailed job descriptions, education required, and expected salary, as well as impacts on educational system to provide skilled workers. For secondary effects of the project on area economy and employment, provide a breakdown by municipality, county (including communities in adjacent states).

2.2.3. Property values.

Report and summarize assessed property values in the area of the proposed mine.

Describe the direct, secondary and cumulative short- and long-term property value effects of the proposed mine and associated energy and transportation facilities, including an estimate of any revenue to the area community resulting from the project in terms of taxes, shared revenue, or payments in lieu of taxes.

2.2.4. Land use and zoning.

Identify, describe, locate and map land use and zoning on all project-related sites and in the area of the proposed mine. Include the total number of acres in each existing zoning and land use classification on all proposed sites, and the number of acres affected by the project in each classification.

Describe and map any changes to land use and zoning that will occur as a result of the proposed mine project.

2.2.4.1. Land use plans.

Include analysis and discussion, and copies of any land-use plans adopted by local governments on all project-related sites and in the area of the proposed mine. Include not only general land-use plans, but also other relevant planning documents such as county recreation plans, farmland preservation plans, highway development plans, and sewer service area plans.

Describe any changes to plans that would result from the proposed project.

2.2.4.2. Residential.

Identify, describe, locate and map residential housing patterns on all project-related sites and in the area of the proposed mine.

Describe projected housing stock needs and shortfalls during construction, operation and closure phases of the project.

Describe and map the direct, secondary and cumulative short- and long-term impacts to housing patterns from project construction and operations.

2.2.4.3. Commercial.

Identify, describe, locate and map commercial development patterns on all project sites and in the area of the proposed mine.

Describe and map the direct, secondary and cumulative short- and long-term impacts to commercial development from project construction and operations.

2.2.4.4. Industrial.

Identify, describe, locate and map industrial development patterns on all project-related sites and in the area of the proposed mine.

Describe and map the direct, secondary and cumulative short- and long-term impacts to industrial development from project construction and operations.

2.2.4.5. Agricultural.

Identify, describe, locate and map any agricultural lands and farming activities on all project-related sites and in the area of the proposed mine. Include the presence of drainage tile or irrigation systems on proposed sites.

Provide information on any farmland preservation agreements for the proposed sites.

Describe and map the direct, secondary and cumulative short- and long-term impacts to agricultural lands and operations.

2.2.4.6. Forestry.

Identify, describe, locate and map forestry lands and activities on all project-related sites and in the area of the proposed mine.

Provide information on forest lands enrolled in any Managed Forest Law, Forest Crop Law, or Conservation Reserve Program that may be affected by the project.

Describe and map the direct, secondary and cumulative short- and long-term impacts to forestry lands. If replacement or withdrawal of lands under the County Forest Law is required, describe in detail.

2.2.4.7. Transportation and utilities.

Identify, describe, locate and map all transportation and utility facility lands on all project-related sites and in the area of the proposed mine.

Describe and map the direct, secondary and cumulative short- and long-term impacts to transportation and utility lands and facilities. Include any permanent changes required to existing roads, railroads, traffic signals, *etc.*, as a result of this project.

2.2.4.8. Recreational and public lands and

Identify, describe, locate and map all recreational and publicly-owned lands on all project-related sites and in the area of the proposed mine, including parks, forests, scenic areas, publically accessible hunting/trapping lands, *etc.*

Describe and map the direct, secondary and cumulative short- and long-term impacts to recreational and public lands.

2.2.4.9. Tourism.

Describe existing extent of tourism-related activities in the area of the proposed mine site including an estimate of the economic impact of tourism in the area. Describe the direct, secondary and cumulative short- and long-term impacts to tourism as a result of the project.

2.2.4.10. Public services.

List all services to be provided by the city, town, and/or county during construction and when the project is in operation (*e.g.* water, fire, EMS, police, security measures, and traffic control). Specifically, address community and facility readiness for emergency incidents.

Describe and provide copies of all local agreements.

Identify and describe all local government infrastructure and facility improvements required (*e.g.* sewer, water lines, roads, railroad, police, and fire). Describe the effects of the proposed project on city, village, town and/or county budgets for these items.

2.2.4.11. Public water supplies.

Identify all affected public water systems, and the reserve capacity of the municipal water systems.

Describe the impact of the project on the ability of affected municipalities to provide water to municipal customers. Include any impacts to municipal water quality.

2.2.4.12. Public wastewater systems.

Identify all affected public wastewater systems.

Identify direct and secondary impacts, if any, to municipal treatment systems and user charges (*e.g.* whether a municipal system would require any expansion or upgrades to receive wastewater).

2.2.4.13. Landfills.

Identify all affected solid waste disposal sites and systems and user charges.

Identify direct and secondary impacts, if any, to municipal or commercial landfills and other solid waste facilities (*e.g.* transfer stations and recycling centers), such as whether facilities would require expansions or upgrades, or have reduced site life due to disposal of project wastes.

2.2.4.14. Health and educational services.

Identify, locate, describe and map all schools, day care centers, hospitals, nursing homes and senior citizen centers in the vicinity of project-related sites, or that may otherwise be

affected by the proposed project. Include a table indicating the distance (in feet) to from the mine site boundary to each of these facilities.

Describe project-related impacts to these services, including local school system enrollment and budgets.

2.2.5. Traffic and safety.

Describe current traffic and public safety conditions in the area of all project-related sites.

Describe changes in the types and frequency of traffic expected on roads and railroads due to project construction and operation.

Describe other public safety concerns associated with the proposed project construction or operation, such as blasting.

2.2.6. Health.

Describe current public health conditions in the project area.

Provide a human health risk assessment for all expected emissions and conditions. Include risks to:

- Mine site employees and visitors.
- Potentially affected and nearby residential populations.
- Potentially affected and nearby school and day care center students, visitors and staff.

Potentially affected and nearby hospital, nursing home and senior citizen center patients, residents, visitors and staff.

2.2.7. Aesthetics.

For all aesthetic environmental issues, include proximity and sensitivity of affected populations near all project-related sites.

2.2.7.1. Visual.

Include analysis, discussion, maps, diagrams and photographic simulations of current conditions and conditions during various project phases and at closure for all project-related sites. Describe changes to the appearance of all sites.

Include current lighting conditions, as well as proposed lighting conditions and schedules during construction, operation and at closure for all project-related sites. Provide copies of any local ordinances relating to lighting that could apply.

Describe any mitigation techniques that could be employed to reduce, minimize or eliminate visual impacts.

2.2.7.1.1. Viewshed and public observation locations.

Describe and map the area within which the mine site can be seen, and would be able to be seen during construction, operation and at closure.

Describe and map specific publically accessible locations from which the mine site can be seen, and would be able to be seen during construction, operation and at closure. Include locations such as public roads, trails, lands, overlooks and waterways.

2.2.7.1.2. Photographic simulations.

Provide current condition photographs of the proposed mine site taken from each identified publicly accessible location during leaf-on and leaf-off conditions. For each photograph, include: date, time, elevation, direction, camera and lens specifications, f-stop, and photographer's name and affiliation.

Provide spatially-accurate photographic simulations of the proposed mine site at the major construction and operation phases, including at closure, based on the current condition photographs. For each photographic simulation, include: current condition photograph, software used, a description of the simulation process, and simulation team names, titles and affiliations.

2.2.7.2. Noise and vibration.

Provide existing noise measurements and characterization at all project-related sites.

Provide copies of any local noise ordinance at all project-related sites.

Provide estimates of noise/and vibration impacts from: mining operations including blasting, rail car couplings, and waste rock unloading. Describe measures that could be employed to mitigate or reduce project-related noise.

2.2.7.3. Odors.

Describe current conditions at all project-related sites.

Identify and quantify any odors that may be perceptible outside the project boundary during both construction and operation at all project-related sites.

2.2.8. Archaeological and historic resources.

Provide a list of all historic and archeological sites and values potentially affected by an activity associated with the proposed project. This information is available from the Wisconsin Historical Society (WHS), Wisconsin Historic Preservation database (WHPD), which may require a fee or subscription. Qualified archeologists generally have access to the WHPD database. List the county, town, range, section and ¼, ¼ section in which impacts may occur.

For each archeological or historical resource identified, describe how the proposed project might affect the resource and how the project could be modified to reduce or eliminate any potential effect on the resource.

If after consultation with the WHS and Department staff, the work of a qualified archeologist is required, reference the archeologist's report.

2.2.9. Tribal.

A thorough investigation and discussion of the following need to be included.

2.2.9.1. Treaty rights.

- 2.2.9.2. Tribal lands and communities.**
 - 2.2.9.2.1. Reservation.**
 - 2.2.9.2.2. Ceded territory.**
- 2.2.9.3. Natural and traditional cultural resources.**
 - 2.2.9.3.1. Wild rice.**
 - 2.2.9.3.1.1. Cultural value.**
 - 2.2.9.3.1.2. Economic value.**
 - 2.2.9.3.1.3. Environmental value.**
 - 2.2.9.3.2. Other wild plants**
 - 2.2.9.3.3. Animals**
 - 2.2.9.3.4. Other cultural resources.**

3. Alternatives – environments and consequences.

For alternatives that may reduce or eliminate adverse direct, secondary or cumulative environmental consequences (or effects) at the mine site and all ancillary facility sites, include resources used in the analyses: lists, descriptions, sources of information, impact analysis methods and results, maps, diagrams, photographs and photographic simulations.

- 3.1. No action.**
- 3.2. Larger project scale.**
- 3.3. Smaller project scale.**
- 3.4. Alternative site layouts.**
- 3.5. Alternative methods.**
 - 3.5.1. Ore management alternatives.**
 - 3.5.2. Ore transport alternatives.**
 - 3.5.3. Mining waste handling and storage alternatives.**
 - 3.5.4. Other alternative methods.**
- 3.6. Alternative production rates.**
- 3.7. Alternative schedules.**
- 3.8. Mitigation alternatives.**
 - 3.8.1. Water source alternatives.**
 - 3.8.2. Surface water management alternatives, measures to reduce navigable water impacts, and mitigation.**
 - 3.8.3. Wetland management alternatives and mitigation.**
 - 3.8.4. Other.**
- 3.9. Reclamation, closure and long-term management alternatives.**

4. Correspondence.

Provide copies of correspondence to and from federal permitting agencies that relate to permit approval or compliance approval.

Provide copies of correspondence to and from state permitting agencies (other than DNR) that relate to permit approval or compliance approval.

Provide copies of correspondence to and from tribal permitting agencies that relate to permit approval or compliance approval.

Provide copies of any substantive correspondence to or from local governments.

Provide copies of any substantive correspondence to or from transportation, energy, or other utility providers.

5. Public contacts.

Provide a separate alphabetized list (names and addresses) in Microsoft excel or a compatible program for each of the groups described below:

- Property owners and residents in the vicinity of the proposed mine site.
- Public properties and facilities, such as schools.
- Clerks of cities, villages, townships, counties, and Regional Planning Commissions (RPC) directly affected.

Provide a description of attempts made to communicate with and provide information to the public. Describe efforts to date and any planned public information activities. Provide copies of public outreach mailings.

Describe plans and schedules for maintaining communication with the public (*e.g.* public advisory board, local impact committees, open houses, suggestion boxes, and newsletters).

6. References and literature cited.

Important notes on digital forms of graphics for EIR

All required drawings and maps should be supplied in both hard copy and digital formats.

- Digital GIS map formats:
 - Provide map files in .mxd format for all GIS maps in the application.
 - Provide published map files in .pmf format for all GIS maps in the application.
 - All map files should also be provided in PDF format.

Scale drawings of proposed plant facilities should be in AutoCad *.dwg format or *.dxf format (check with DNR staff for the appropriate AutoCAD release). The preference is *.dwg. Scale drawings should also be provided in PDF format.

Geographic Information Systems (GIS) data files should be submitted in Shapefile format (ESRI ArcGIS 9x). All GIS data submitted should be projected to Wisconsin Transverse Mercator (WTM), a projection system unique to Wisconsin and used by Wisconsin state agencies. The WTM uses North American Datum (NAD) 83/91. The projection parameters for WTM are:

Projection	Transverse Mercator
Spheroid	GRS80
Scale Factor at Central Meridian	0.9996
Longitude of Central Meridian	90° W (-90°)
Latitude of Origin	0°
False Easting	520,000
False Northing	-4,480,000
Unit	Meter

- Digital versions of orthophoto images of the existing landscape at the proposed project site/sites **MUST** be suitable for use on the DNR’s GIS platform. **DO NOT** obscure any portion of the aerial photographic images provided in the application. Digital aerial photographic images must be properly georeferenced. All digital aerial photographic images **MUST** be accompanied by the geographic coordinate and projection system to which they have been georeferenced.
- Scanned maps and diagrams that cannot be submitted in any other format must be submitted in GIF format at a minimum color depth of 256 colors, and a minimum 300 ppi. Hard copy prints of these files should be submitted at a minimum resolution of 300 dpi.
- When providing maps, note facility locations but do not obscure map details.

Photographs and photographic renderings of proposed facilities on the existing landscape must be submitted in high-resolution (minimum 300 ppi) uncompressed TIF or maximum-resolution JPG format. Uncompressed camera-RAW files should be provided (if available) in addition to TIF or JPG files. Hard copy prints of these files should be submitted at a minimum resolution of 300 dpi.