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May 17, 2012

Ms. Anne Hurlburt  
Scandia City Administrator  
Scandia City Office  
14727 209th Street North  
Scandia, MN 55073

Re: Take Action-Conserve Our Scandia Comment on Zavoral Mine Draft  
Environmental Impact Statement

Dear Ms. Hurlburt:

On behalf of our client, Take Action-Conserve Our Scandia ("TA-COS"), we submit this Comment on the Zavoral Mine & Reclamation Project Draft Environmental Impact Study ("DEIS") published March 19, 2012 in the EQB Monitor. TA-COS is a group of residents from Scandia and the surrounding area concerned that the development of the gravel mine at the Zavoral property proposed by Tiller Corporation ("Tiller") will negatively affect the Scandia community and environment. TA-COS has commissioned a series of expert reports to evaluate the impact of the proposed mine and the sufficiency of the DEIS.

As demonstrated in these expert reports, the DEIS does not meet the Minnesota Environmental Policy Act's, Minn. Stat. § 116D.01 et seq. ("MEPA") basic requirements for an Environmental Impact Statement ("EIS") on multiple grounds, which renders the DEIS inadequate as a matter of law. Specifically, the DEIS fails to account for current market information and industry research which "indicates that as a result of the mine, there will be a home value reduction of 25% within ¼ mile of the mine and a 5% reduction as far as three miles from the mine." Property Value Impact Report at 6-7. The DEIS is "devoid of the technical analysis needed to evaluate the traffic operation and safety of the project," which "could result in significant safety issues to Scandia and the surrounding communities, including the increased risk for severe or fatal collisions." Traffic Analysis Report at 2. The DEIS does not address significant environmental impacts of the Tiller mine, including how Species of Concern in the adjacent Regionally Significant Ecological Area will be adversely affected or how runoff from the mine may affect brook trout in Zavoral Creek and endangered mussels in the St. Croix River.

Furthermore, the DEIS fails to consider reasonable and feasible alternative sites for a gravel mine that would utilize available aggregate that is either (a) within the Scandia region, (b) within the Metro Region, or (c) located in Northern Minnesota and transported to the Metro Region by rail. The DEIS also fails to consider an alternative mine layout that reduces the mine footprint to avoid disturbing the portions of the proposed mine which contain native or reestablished trees and provides a 50-meter buffer zone between the mine and adjacent forests. Additionally, the DEIS fails to consider an alternative that includes reclamation without further mining. Finally, the DEIS fails to consider reasonable and effective mitigation measures,

Ms. Anne Hurlburt  
May 17, 2012  
Page 2

including replanting, monitoring, and financial assurance requirements. This Comment will discuss these defects in the DEIS in detail.

This Comment begins by reviewing the standard for an EIS under MEPA. The Comment then introduces the expert reports and discusses the deficiencies with the DEIS that the expert reports identify. As noted, there are three central areas the DEIS has failed to adequately consider as identified in the expert reports commissioned by TA-COS. First, the DEIS fails to adequately consider significant impacts of the Tiller mine proposed on the Zavoral property as required by MEPA, including the impact to property values, the impact to traffic, and the impact to the environment. Second, the DEIS fails to meet the requirements of MEPA that an EIS consider reasonable and feasible alternatives, including an alternative site, an alternative mine layout, and a reclamation-only alternative. Finally, the DEIS does not consider sufficient mitigation measures as required by MEPA. As the Responsible Government Unit (“RGU”), the City of Scandia (“City”) is required to remedy these deficiencies in the DEIS before the final EIS can be considered adequate and complete under MEPA. Minn. R. § 4100.2600.

#### I. The Requirements of MEPA

MEPA requires that an EIS be prepared when there is any major government action that has the potential for significant environmental effects. Minn. Stat. § 116D.04, subd. 2a. The purpose of the EIS is to analyze the significant environmental impacts, discuss appropriate alternatives to the proposed action, and identify means to mitigate the adverse impacts. *Id.* In addition to considering the environmental impacts, the EIS must also analyze the economic, employment, and sociological effects that cannot be avoided if the action is taken. *Id.* MEPA requires the following:

The environmental impact statement shall be an analytical rather than an encyclopedic document which describes the proposed action in detail, analyzes its significant environmental impacts, discusses appropriate alternatives to the proposed action and their impacts, and explores methods by which adverse environmental impacts of an action could be mitigated. The environmental impact statement shall also analyze those economic, employment, and sociological effects that cannot be avoided should the action be implemented.

Minn. Stat. § 116D.04, subd. 2a. The EIS must take a “hard look” at the potential environmental impacts of the proposed Tiller mine in order to be considered sufficient, or the EIS will be deemed inadequate. See *CARD v. Kandiyohi County Bd. of Comm’rs*, 713 N.W.2d 817, 838 (Minn. 2006); *Reserve Mining Co. v. Herbst*, 256 N.W.2d 808, 825 (Minn. 1977) (“[W]here there is a combination of danger signals which suggest the agency has not taken a ‘hard look’ at the salient problems and has not genuinely engaged in reasoned decision-making it is the duty of the court to intervene.”) (quotations omitted).

The Minnesota Environmental Quality Board (EQB), under its MEPA authority, has established detailed rules specifying the requirements for an EIS. Minn R. § 4410.0200 et seq. These rules detail the requirements for alternatives; the type of environmental, economic,

Ms. Anne Hurlburt  
May 17, 2012  
Page 3

employment, and sociological impacts analyzed; and the mitigation measures considered, which are discussed as follows.

a. Alternatives

An EIS must consider the potential significant impacts of the alternatives to the proposed project along with the impacts the project will have. Minn. R. § 4410.2300(G). "The EIS must address one or more alternatives of each of the following types: . . . alternative sites, alternative technologies, modified designs or layouts, modified scale or magnitude, and alternatives incorporating reasonable mitigation measures identified through comments received." *Id.*

An alternative, including an alternative site, must be considered when the alternative is feasible. See *Iron Rangers for Responsible Ridge Action v. Iron Range Resources*, 531 N.W.2d 874, 882 (Minn. Ct. App. 1995). Only where an alternative would not meet the underlying need or purpose of the project, or where it will have similar environmental benefits but substantially less adverse economic, employment, or sociological impacts, may the alternative be excluded from consideration. Minn. R. § 4410.2300(G).

Failure of an EIS to analyze available alternatives will result in the EIS being deemed inadequate. See *Iron Rangers for Responsible Ridge Action v. Iron Range Resources*, 531 N.W.2d 874, 882 (Minn. Ct. App. 1995); *State by Archabal v. County of Hennepin*, 495 N.W.2d 416, 416 (Minn. 1993) (government action reversed for failure to show lack of feasible alternative construction site).

b. Environmental, Economic, Employment, and Sociological Impacts

For the proposed project and each major alternative, the EIS must provide a thorough discussion of potentially significant adverse or beneficial environmental, economic, employment, and sociological impacts generated by the proposed action or alternative. Minn. R. § 4410.2300(G). These impacts should include direct, indirect, and cumulative impacts. *Id.* Data and analysis must be provided that is sufficient to consider the importance of the impact analyzed and give enough information to provide a reasoned choice among the alternatives. *Id.* The EIS must discuss major differences of opinion concerning the significant impacts. *Id.*

c. Mitigation Measures

The EIS must identify mitigation measures that could reasonably eliminate or minimize any adverse impact of the proposed project. Minn. R. § 4410.2300(G). Specifically, mitigation is defined to include (a) avoiding impacts altogether by not undertaking a certain project or parts of a project; (b) minimizing impacts by limiting the degree of magnitude of a project; (c) rectifying impacts by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating impacts over time by preservation and maintenance operations during the life of the project; (e) compensating for impacts by replacing or providing substitute resources or environments; and (f) reducing or avoiding impacts by implementation of pollution prevention measures. Minn. R. § 4410.0200, subp. 51. The mitigation measures considered should be specific and able to be implemented. See *Nat'l Audubon Soc'y v. MPCA*, 569 N.W.2d 211, 218

Ms. Anne Hurlburt  
May 17, 2012  
Page 4

(Minn. Ct. App. 1997). Correspondingly, the mitigation measures considered should not be vague statements of good intentions. *Id.*

## II. Expert Reports

TA-COS, in order to ensure a complete and accurate EIS, has commissioned three expert reports to analyze and evaluate the sufficiency of the DEIS, which it incorporates in this Comment in the appendices hereto. The first report, the ZAVORAL MINE ECOLOGICAL REVIEW OF DRAFT ENVIRONMENTAL IMPACT STATEMENT prepared by Applied Ecological Services, Inc. ("AES Report") (attached as Appendix A), reviews the sufficiency of the analysis in the DEIS of the significant ecological impacts, the available alternatives to the proposed action, and mitigation measures as required by Minn. Stat. § 116D.04, subd. 2a. Applied Ecological Services, Inc. ("AES") provides ecological and restoration design and environmental contracting services. Dr. Kim Chapman, an author of the AES Report, is a principal ecologist at AES with a Ph.D. in conservation biology and has 25 years experience in ecological research, natural resource planning, land restoration, and land management. Doug Messing, the other author of the AES report, is a senior ecologist at AES with a masters degree in conservation biology and 19 years of experience in the ecological and environmental fields, including natural resource inventory and assessment and conservation planning, design, and development.

The second report, the REVIEW OF BRKW'S MARKET ANALYSIS: THE IMPACT ON PROPERTY VALUES IN SCANDIA DUE TO THE PROPOSED ZAVORAL/TILLER MINING OPERATION prepared by Lisa Philippi ("Property Value Impact Report") (attached as Appendix B), addresses the adequacy of the DEIS's consideration of economic impacts, specifically the unavoidable impact of the Tiller mine on home values, as required by Minn. Stat. § 116D.04, subd. 2a. The report's author, Lisa Philippi, is a professional mortgage broker with 32 years of experience in the real estate industry and a respected member of the Scandia community.

The third report, the DRAFT ENVIRONMENTAL IMPACT STATEMENT TRAFFIC ANALYSIS OF THE ZAVORAL MINING PROJECT prepared by RLK Incorporated ("Traffic Analysis Report") (attached as Appendix C), reviews the DEIS's assessment of the traffic impacts that will result from the Tiller mine. Vernon Swing, the report's author, is a professional traffic engineer with 26 years of traffic engineering and transportation planning experience.

In addition to these reports, TA-COS has compiled historic materials on mining at the Zavoral property ("Historic Materials") (attached as Appendix D). These materials provide an overview of past mining at the Zavoral property and the impact that resulted.

The City as RGU is obliged to respond and address the issues identified in this Comment and its accompanying reports in preparing the final EIS for the Tiller mine. Minn. R. § 4100.2600.

Ms. Anne Hurlburt  
May 17, 2012  
Page 5

### III. Impact on Property Values

The DEIS inaccurately and inadequately considered the impact of the Tiller mine on property values in Scandia as described in the Property Value Impact Report. MEPA requires that an EIS analyze the economic impacts of a proposed project that cannot be avoided. Minn. Stat. § 116D.04, Subd. 2a. The DEIS attempts to satisfy this requirement with the Market Analysis prepared by BRKW Appraisers. See DEIS at ES-12.

The BRKW Market Analysis, however, does not provide the “hard look” at economic impacts required under MEPA. As described by Lisa Philippi in the Property Value Impact Report, the BRKW Market Analysis does not meet professional appraisal standards. See Property Value Impact Report at 6. The particular deficiencies of the BRKW Market Analysis include the fact that it uses outdated market information that vastly underestimates the market impact, uses an insufficient sample of home sales, and ignores industry research on the impact of gravel mines on home values. *Id.* at 6. Specifically, the BRKW Market Analysis fails to satisfy the Uniform Standards Professional Appraisal Practices, commonly accepted practices in the appraisal industry, in the following ways:

BRKW compared a very small sampling of 22 home sales comparables compared to Diane Hite’s study using 2,552 homes. BRKW only used a small data set analysis, which was the matched pair approach. An adequate appraisal would also use a large data set analysis such as the Hedonic method.

BRKW did not explain why the scope of the study was only a one-mile radius of properties and then also did not explain why it ended up with only ¼ mile radius of affected properties.

BRKW did not use a cross section of property values, such as a high priced home, middle range home, low valued home, large acreage properties, especially with Scandia having varied property types and values. The home sale comparables were all in the \$200,000 - \$300,000 range.

BRKW did not utilize recent home sale comparables within the last couple of years. They utilized 2006 and 2007 comparables from the peak of the housing market boom, which would show a decreased effect on value loss.

BRKW did not utilize home sale comparables from either the Scandia Mine area, located off of Lofton or the Franconia Mine area. Even if there were limited comparables available, this information should have been evaluated.

BRKW’s study did not compare value reduction with the different Mining time lines. Such as the 10-year, five-year and one-year proposed plan. For example, the one-year plan having increased truck traffic over the other plans could affect property values more but for a shorter period of time.

Ms. Anne Hurlburt  
May 17, 2012  
Page 6

BRKW utilized mines located in Maple Grove, Rosemount, and Andover, which are very high density housing areas in a suburban setting. This is not at all comparable to Scandia's rural nature and their unique river front properties.

Property Value Impact Report at 6. Because the DEIS does not conduct an assessment of the mine's impact to home values that meets minimum professional standards, the DEIS fails to provide the "technical knowledge and expertise" expected of an agency in preparing an EIS. See *Minn. Ctr. for Env'tl. Advocacy v. MPCA*, 644 N.W.2d 457, 464 (2002).

As a result of these deficiencies, the DEIS fails to account for current market information and industry research that "indicates that as a result of the mine, there will be a home value reduction of 25% within ¼ mile of the mine and a 5% reduction as far as three miles from the mine." Property Value Impact Report at 6–7. This reduction in home values "represents a loss of millions of dollars to the residents of Scandia and has the potential to impose significant economic hardship on individual residents" and is a significant and unavoidable economic impact on residents of the Scandia community. *Id.* at 7; Minn. Stat. § 116D.04, Subd. 2a.

Consequently, the DEIS does not constitute the "hard look" at the unavoidable economic impacts as required by MEPA. Minn. R. §§ 4410.2300(G)–(H). The EIS must accurately consider the significant economic impact to Scandia and its residents that will result from the Tiller mine's impact on home values in a manner meeting industry standards as required by MEPA in order to be considered adequate. Minn. Stat. § 116D.04, Subd. 2a.

#### **IV. Traffic Impacts**

The DEIS determined that the traffic impact of the mine has the potential to cause economic and sociological impacts, including the potential to affect safety and tourism. DEIS at ES-24–27. The DEIS's analysis of the mine's potential impacts, however, is inadequate because it is "devoid of the technical analysis needed to evaluate the traffic operation and safety of the project." Traffic Analysis Report at 1. The EIS should provide an adequate analysis of traffic impacts as described in the Traffic Analysis Report in order to meet the requirements of MEPA. Minn. Stat. § 116D.04, Subd. 2a.

The Traffic Analysis report identifies eleven separate deficiencies in the DEIS's traffic study. The deficiencies are as follows:

- As presented, this report only includes Average Daily Traffic (ADT) information and does not include AM and/or PM Peak Hour turning movement volumes. Turning movement volumes are important to the overall operational analyses of intersections.
- It is unclear whether the ADT information provided has been adjusted to reflect seasonal fluctuations (i.e., recreational traffic on the scenic byway, etc.), and whether this adjusted traffic will be impacted by the hauling operations.

Ms. Anne Hurlburt  
May 17, 2012  
Page 7

- The analysis must include adequate capacity analyses of specific intersections. Operational analysis typically includes Level of Service Analysis and Warrant Analysis.
- The DEIS investigated crash statistics for only three years, yet there is at least ten years of crash data available related to the gravel operation. One such crash was a fatality involving a hauling truck and a pedestrian directly relatable to gravel operations. With such data available, the DEIS should consider the ten years of data.
- The DEIS does not include an Intersection Crash Performance analysis using the Mn/DOT methods of calculating intersection crash rate per million entering vehicles, severity rate, crash density, or crash cost per year. Nor does the DEIS include Segment Crash Performance analyses. These calculations allow comparisons with similar intersections statewide in order to verify severity.
- The response to question 21 of the DEIS suggests that the traffic will be the same for Class C production, yet in its present condition, the traffic associated with Class C production arrives via Hwy 243, Hwy 95 and Hwy 97, resulting in a right turn from Hwy 95 to Hwy 97. In the proposed condition, the Class C will come from the Zavoral mine, requiring the traffic associated with this production to progress across Hwy 95. This will increase the traffic conflict opportunities from 2 to at least 6, resulting in degradation in safety.
- The DEIS does not present traffic analysis of the existing, the short-term build (1st year after completion) short-term no-build, long-term build or no-build scenarios. Typically, development traffic analysis identifies the existing traffic, the projected No-Build traffic operational analyses, and then presents the development's trip generation and Build traffic operational analyses. Projected turning movements levels of service must be presented to assess whether the use constitutes an impact and to provide a comparison between the scenarios.
- The DEIS does not state the sight distances at any of the study locations. Sight distances are important in determining gap analysis of intersections. Because trucks take a longer time to progress from a standing stop, larger gaps in the traffic stream are required, as opposed to smaller vehicles. Gap analysis must also take into account the vertical and horizontal changes in the roadway alignment throughout the study area. The DEIS needs to analyze these gaps, both for the current conditions and the conditions in the future.

Ms. Anne Hurlburt  
May 17, 2012  
Page 8

- Safety is discussed from the stand point of crashes, without special attention drawn to the design vehicle used to transport the mined material. Trucks used for this activity accelerate and decelerate at significantly slower rates, which can have an adverse impact on the ability to avoid collisions, and increase the safety risks. The dismissive comment regarding the lack of evidence of near miss occurrences does not adequately address the potential that exists.
- There is no discussion of the structural capacity of the roadways and their ability to handle the increase in daily truck trips. The DEIS must provide an assessment of the existing and future pavement condition.
- Mitigation is summarized in the DEIS, yet there is no quantitative discussion of the impacts and changes to the operations or safety of the roadway network associated with the proposed mitigation strategies. These mitigation measures should also be quantified and prioritized.

Traffic Analysis Report at 1-2. Because the DEIS does not conduct an appropriate or complete technical analysis of traffic impacts meeting professional standards, the DEIS's traffic analysis fails to provide the "technical knowledge and expertise" expected of an agency in preparing an EIS. See *Minn. Ctr. for Env'tl. Advocacy v. MPCA*, 644 N.W.2d 457, 464 (2002).

In addition to not providing a sufficient analysis of traffic impacts meeting professional standards, the DEIS failed to provide an analysis of the variation in traffic impacts for each alternative as required by MEPA. As noted by the Traffic Analysis Report, "[t]he DEIS does not present traffic analysis of the existing, the short-term build (1st year after completion) short-term no-build, long-term build or no-build scenarios." Traffic Analysis Report at 2. The failure to consider the variation in traffic impacts for each alternative is a violation of MEPA, which requires that "for the proposed project *and each major alternative* there shall be a thorough but succinct discussion of potentially significant adverse or beneficial effects generated, be they direct, indirect, or cumulative." Minn. R. § 4410.2300(H) (emphasis added).

Most concerning about the DEIS's traffic analysis, however, is RLK's statement that "Developing the mine without appropriate traffic analysis, as we recommend, could result in significant safety issues to Scandia and the surrounding communities, including the increased risk for severe or fatal collisions." Traffic Analysis Report at 2. Especially at the junction of Highway 97 and Highway 95, the potential for severe traffic accidents as a result of gravel hauling is a proven risk. On April 24, 2012, the junction was the location of a gravel truck rolling over, which sent the driver to the hospital and spilled the truck's contents. Phillip Brock, *One Injured in Semi Rollover*, COUNTRY MESSENGER, May 2, 2012. Given the proven potential for increased risk of severe or fatal collisions as a result of the Tiller mine, the DEIS's failure to provide an adequate assessment of traffic impacts is a grievous error which endangers the Scandia community and must be corrected.

Ms. Anne Hurlburt  
May 17, 2012  
Page 9

Because of deficiencies identified by RLK in the Traffic Analysis Report, the DEIS “is incomplete, does not meet the minimum analysis requirements for environmental review, and prevents any opportunity to evaluate the traffic impact of the Zavoral Mining operation.” Traffic Analysis Report at 2. Therefore, the “DEIS does not address the traffic impacts as required by the EIS process,” and does not constitute a “hard look” as mandated by MEPA. Traffic Analysis Report at 2; Minn. R. §§ 4410.2300(G)–(H).

## V. Environmental Impacts

The Minnesota Legislature decreed that the purpose of preparing an EIS is to “to enrich the understanding of the ecological systems and natural resources important to the state and to the nation.” Minn. Stat. § 116D.01(c). The DEIS, however, fails to fulfill this statutory mandate since it does not adequately analyze the impacts to the environmental ecology of the region and the impact to water resources as described in the AES Report. *Id.*; See also *State ex rel. Wacauta Twp. v. Brunkow Hardwood Corp.*, 510 N.W.2d 27 (Minn. Ct. App. 1993) (enjoining proposed project due to the potential to impact threatened species).

### a. Impact on Regional Environment and Ecology

The DEIS’s analysis of ecological impacts is inadequate because “The DEIS focuses only on the site and direct impacts from changes in land cover and habitat conversion. The DEIS lacks discussion of the site’s larger ecological context, rare species located near and adjacent to the site, and impacts likely to result from habitat fragmentation and edge effects, including noise impacts to wildlife.” AES Report at 8. The failure to consider the impact to a larger ecological context is a significant inadequacy in the DEIS because mining will be adjacent to, and adversely affect, the St Croix National Scenic Riverway and associated National Park, and mining would eliminate part of a Minnesota Department of Natural Resources (“MNDNR”)-identified Regionally Significant Ecological Area (“RSEA”). *Id.* at 8.

The impact to the RSEA and St. Croix National Riverway is a significant environmental impact for multiple reasons, including the fact that there are numerous records of “rare plants, animals, fishes, reptiles, mussels, and native plant community occurrences within a 1-mile radius of the Site.” (AES Report at 7). AES identifies the following endangered and threatened species within the RSEA as having the potential to be affected by the Tiller mine as a result of its edge effects:

- Kitten-tails (*Besseyia bullii*; Minnesota Threatened)
- Bog blue grass (*Poa paludigena*; Minnesota Threatened)
- American ginseng (*Panax quinquefolius*; Minnesota Special Concern)
- Red-shouldered hawk (*Buteo lineatus*; Minnesota Special Concern)
- Blanding’s turtle (*Emydoidea blandingii*; Minnesota Threatened)

Ms. Anne Hurlburt  
May 17, 2012  
Page 10

- Several threatened and endangered species of mussels occurring within the St. Croix River

AES Report at 7. In addition to these species in the surrounding RSEA, there are species of concern within the mine area that will be directly impacted or destroyed, including raptors and Butternut trees, a Minnesota Special Concern Tree. According to the MNDNR, “A species is considered a species of special concern if, although the species is not endangered or threatened, it is extremely uncommon in Minnesota, or has unique or highly specific habitat requirements and deserves careful monitoring of its status.” *Id.* at 8. There are also multiple native tree communities adjacent to the mine site that are classified as “good quality” forests, which provide habitat to many of the notable species within the RSEA. *Id.* at 7. These forests provide habitat for sensitive wildlife species, and removing the forests or mining adjacent to them would harm the ecology of the region. *Id.* at 9.

These critical species and their habitat will be adversely affected by the Tiller mine. Federally-listed endangered mussels have been identified in the St. Croix River immediately downstream of the Zavoral property and will be adversely affected by sediment-laden or warm runoff from the mining operation. *Id.* at 18. Noise from mining will disturb nesting of songbirds which have been documented in the area. *Id.* at 9. As currently proposed, the mine would impact approximately 172 acres of forest-breeding bird habitat. *Id.* at 17. Additionally, opening the forest edge to disturbance creates an opportunity for introduction of invasive species. *Id.* at 17. Invasive species are already present on the mine site, and disturbing existing tree communities will encourage the encroachment of invasive species into intact habitat. *Id.*

The Tiller mine’s potential impact to the RSEA, the regional habitat, and sensitive species should be considered in detail in the EIS given the unique and valuable nature of these natural resources. See *State ex rel. Wacauta Twp. v. Brunkow Hardwood Corp.*, 510 N.W.2d 27 (Minn. Ct. App. 1993) (articulating the factors which determine the significance of environmental effects).

b. Impact on Water Resources

The DEIS’s failure to sufficiently analyze the impact of the mine on water resources is another major inadequacy in the DEIS as there is the potential for significant adverse effects to water resources and ecosystems. As identified by the AES Report, the DEIS fails to address the prescribed “issues of: a) identifying and mapping the location of springs in the project area and areas of potential impact; b) providing water quality data for Middle Creek and South Creek; and c) quantifying impacts of specific pollutants (e.g., phosphorus, TSS, heavy metals, PAHs, VOCs, temperature) on receiving waters.” AES Report at 9. The DEIS should address these issues.

As recommended by AES, “[t]he DEIS should describe how sediment and other pollution from inadequately manage[d] mine runoff may affect Brook Trout and aquatic macroinvertebrates in Zavoral Creek. It should also discuss how the vegetation at spring discharge points, such as the Black Ash Seepage Swamp, could be affected by changed in

Ms. Anne Hurlburt  
May 17, 2012  
Page 11

groundwater discharge.” AES Report at 9. Trout streams are especially sensitive and valuable ecological resources, and any impact of the Tiller mine may have on the Zavoral Creek is a significant environmental impact meriting analysis in the EIS. See *State ex rel. Wacauta Twp. v. Brunkow Hardwood Corp.*, 510 N.W.2d 27 (Minn. Ct. App. 1993) (articulating the factors which determine the significance of environmental effects). In addition, the presence of federally-listed endangered mussels in the St. Croix River means the runoff from the Tiller mine could have an irreversible impact to the endangered mussel species. AES Report at 18.

Finally, the decision not to consider the impact of the mine on water surface use in the DEIS is erroneous. DEIS ES-3. The Historic Materials show that past gravel mining on the Zavoral property has caused the discharge of sediment and other pollutants directly to the St. Croix River. See Historic Materials, Letter from Robert E. Bowen of Gray Plant Mooty & Anderson to Minnesota Pollution Control Agency dated January 25, 1971 at 3–4 (discussing how Barton Contracting Company, a corporate predecessor to Tiller, had caused the discharge of silt into the St. Croix River as a result of gravel mining).

The potential for these impacts on water ecology and surface use to occur is not speculative despite any safety features that Tiller might use. Tiller’s sand mine in Grantsburg, Wisconsin was the source of a major sediment discharge to the St. Croix in April 2012. Joseph Pruski, *Containment Berm at Frac Mine Fails*, COUNTRY MESSENGER, May 15, 2012. That discharge occurred as a result of Tiller’s failed containment berm and continued unnoticed by Tiller until discovered by local residents days later. *Id.* The National Park Service noted that the discharge “could affect fish spawning and mussels.” *Id.*

Given the demonstrated potential for significant negative impact to the waters of the St. Croix River, a National Scenic Riverway, the decision not to include an evaluation of impact to water surface use and ecology is a critical deficiency in the DEIS. The DEIS should be revised to include a detailed analysis of the potential for the Tiller mine to adversely affect the St. Croix River and Zavoral Creek.

## **VI. Alternatives**

MEPA requires that an EIS include consideration of alternative sites, alternative designs or layouts, and alternative scales or magnitudes. Minn. R. § 4410.2300. The DEIS has failed to consider and analyze the options for an alternative site, a modified mine layout, and the reclamation-only alternative as required by MEPA. The justifications for excluding these alternatives from the DEIS are insufficient as illustrated by the AES Report since these alternatives are feasible and can satisfy the need of the proposed project. The EIS must contain an analysis of the options for an alternative site, a modified mine layout, and the reclamation-only alternative, or the EIS will be inadequate. Minn. R. § 4410.2300; See *Iron Rangers for Responsible Ridge Action v. Iron Range Resources*, 531 N.W.2d 874, 882 (Minn. Ct. App. 1995); *State by Archabal v. County of Hennepin*, 495 N.W.2d 416, 416 (Minn. 1993) (government action reversed for failure to show lack of feasible alternative construction site).

Ms. Anne Hurlburt  
May 17, 2012  
Page 12

a. Failure to Consider Alternative Site

The DEIS should be revised to include consideration of an alternative site. MEPA requires an alternative site to be considered if reasonable and feasible. Minn. R. § 4410.2300. According to the AES Report, “[n]umerous unencumbered deposits of sand and gravel are available to serve the metropolitan area” which Tiller could pursue instead of the Zavoral Property. AES Report at 3. Notably, the AES Report finds that “Other unencumbered sand and gravel resources exist nearby and do not impinge on significant natural resources or lands in which the public has made an investment. For this reason, these other gravel resources warrant consideration as alternatives to the Zavoral site.” *Id.* at at 3. Since there are resources in the area which are a viable and reasonable alternative to the Tiller mine, they should be considered as an alternative in the EIS to satisfy MEPA’s requirements. Minn. Stat. § 116D.04, Subd. 2a; Minn. R. § 4410.2300.

Excluding alternative sites from the DEIS is in violation of MEPA because the Revised Scoping Decision Document (“RSDD”) improperly restricted the scope of the DEIS to exclude alternative sites. See Minn. Stat. § 116D.04, Subd. 2a; Minn. R. § 4410.2300. As explained by the EQB, which oversees MEPA review, the purpose and need of the project may not be overly restrictive.<sup>1</sup> The purpose and need as articulated by the DEIS and the RSDD violate this principle. See DEIS 3-15. The RSDD’s explanation that an alternative site need not be considered because “it does not meet the project purpose and need of making use of significant aggregate resources that are found within the Zavoral Mine Site” lacks evidentiary support and is a wholly insufficient justification to disregard the statutory requirement to consider alternative sites. The City has not provided any explanation or evidence that there is a particular need for the specific resources on the Zavoral Property and why alternative resources would be insufficient.

Furthermore, the factors articulated by the EQB to determine whether an alternative site should be evaluated weigh strongly in favor of evaluating rather than excluding an alternative site from review. These factors are:

- (1) Whether the proposer owns the proposed site [and] how long the proposer has owned the site;
- (2) The likelihood that the proposer could sell or otherwise use the proposed site if the project was moved [and] whether the proposer has access to other sites . . .
- (3) Whether the site is an integral part of the project or whether the project could be built on other sites in the general area . . . and

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<sup>1</sup> MINNESOTA ENVIRONMENTAL QUALITY BOARD, GUIDE TO MINNESOTA ENVIRONMENTAL REVIEW RULES 28 (May 2010), available at <http://www.eqb.state.mn.us/documents/Guide%20to%20MN%20ER%20Rules-May%202010.pdf>.

Ms. Anne Hurlburt  
May 17, 2012  
Page 13

- (4) The likely use of the proposed site if the project did not take place on it and the environmental impacts of other uses.<sup>2</sup>

First, the project proponent, Tiller, does not own the site, but has obtained permission from the owner, Dr. Zavoral, to apply for a CUP to open the mine. Tiller's interest in developing the Mine on this site is based on the presence of aggregate, not on any established ownership of the site.

Second, the site has numerous other potential uses as indicated by the DEIS. Allowed uses include a variety of agricultural uses, single family residences, and public parks and recreation facilities. Unlike a mine, these uses are consistent with surrounding land use and are contemplated by the City's current Comprehensive Plan.

Third, the Zavoral property is not integral to the project. Many other sites may satisfy Tiller's objective of opening a gravel mine. See AES Report at 3. The City has acknowledged that other available gravel resources exist. The RSDD, contradicting its own conclusion, admits that there are "significant aggregate resource areas within the Metro Region." The AES Report also demonstrates there are available, unencumbered aggregate resources within the Metro Region, including nearby the Zavoral property, that could be developed as an alternative site and which do not impinge on significant natural resources or lands in which the public has made an investment. AES Report at 3. Additionally, City employees have indicated that it would be financially feasible to transport aggregate to the Metro Region from Northern Minnesota by rail. As a result, there are many alternative site options that could be considered in the EIS.

Fourth, considering an alternative site in the EIS is especially important since the proposed Tiller mine is located next to the St. Croix River. As noted by the DEIS, "Mining noise would likely be audible on the St. Croix." DEIS ES-8. Mining noise audible on the river would significantly and adversely impact the enjoyment of the river as a popular recreational destination, thereby having an impact not only on the ecology of the region but the significant revenue to the region from tourism. The allowed likely uses of the Zavoral property in lieu of a mine would have a much lower environmental impact given the limitation on use imposed by the City Zoning Code. Similarly, an alternative site not located on a National Scenic Riverway would present a lower potential for significant adverse environmental impacts. AES Report at 3.

Given that the City is aware reasonable and feasible alternative sites exist, the EIS should analyze one or more of these alternative sites. To otherwise omit an alternative site from consideration would be a clear violation of MEPA's express requirements. Minn. Stat. § 116D.04, Subd. 2a; Minn. R. § 4410.2300. The EIS should analyze one or more alternative sites for a gravel mine that utilizes available aggregate that is either (a) within the Scandia region, (b) within the Metro Region, or (c) located in Northern Minnesota and transported to the Metro Region by rail.

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<sup>2</sup> *Id.*

Ms. Anne Hurlburt  
May 17, 2012  
Page 14

b. Failure to Consider Alternative Mine Layout

The DEIS should be revised to include consideration of an alternative mine layout. MEPA requires that modified designs or layouts be considered as an alternative if reasonable and feasible. Minn. R. § 4410.2300. The RSDD provides absolutely no justification or explanation for excluding consideration of modified design or layout alternatives in the EIS. The DEIS itself admits that modified designs or layout alternatives are possible and could potentially be adopted, but provides no reason why this alternative was not considered. See DEIS 3-15.

The DEIS incorrectly concludes the City does not have the authority to prohibit mining in the nine-acre area of the Zavoral property that has not been mined in the past. As indicated in the AES Report, mining this area would have an impact. AES Report at 16–17. In addition, the City has the legal authority to place conditions on the mining as it deems necessary for the protection of the environment. See Scandia City Code, §§ 1-8, 4-1.

In order to comply with MEPA, the EIS should consider an alternative layout that reduces the mine footprint to avoid disturbing the portions of the proposed mine which contain native or reestablished trees and provides a 50-meter buffer zone between the mine and adjacent forests. See AES Report at 16–17. The native and reestablished trees provide important ecological habitat, and a mine layout that protects these areas would provide an environmental benefit over the proposed layout. *Id.* Additionally, the proposed mine layout does not include a sufficient buffer. As noted in the AES report, providing an increased buffer zone will protect the surrounding forests and reduce edge effects of the mine. AES Report at 16–18. Preserving native or reestablished trees will also help prevent habitat fragmentation. *Id.*

c. Failure to Consider Reclamation-Only Alternative

The DEIS Historic Materials show that history of gravel mining on the Zavoral property has already involved remediation. DEIS at ES-38. The DEIS dismisses past reclamation activities without analysis. *Id.* However, as noted by AES, significant passive reclamation has already incurred. See AES Report at 16. Furthermore, the DEIS ignores the requirement in past permits for Dr. Zavoral to replace the top soil on the site. *Id.* The DEIS notes that replacement of top soil is recommended as part of the reclamation plan, which the DEIS considers a positive environmental impact of the preferred alternative. In light of Dr. Zavoral's past reclamation activities and past obligations to replace top soil and reclaim the site, the DEIS should consider an alternative that includes reclamation without further mining. Minn. Stat. § 116D.04, Subd. 2a; Minn. R. § 4410.2300.

**VII. Mitigation Measures**

The DEIS proposes multiple mitigation measures. See DEIS at ES-35. All of these mitigation measures should be considered as mandatory conditions of the conditional use permit for the mine in order to assure that these are not vague statements of good intentions. See *Nat'l Audubon Soc'y v. MPCA*, 569 N.W.2d 211, 218 (Minn. Ct. App. 1997). In addition to the mitigation measures described in the DEIS, the EIS should include the mitigation measures identified in the AES Report. AES Report 10–15. The AES Report makes numerous

Ms. Anne Hurlburt  
May 17, 2012  
Page 15

recommendations regarding mitigation measures necessary to satisfy MEPA's requirement to analyze potential mitigation measures, all of which should be incorporated into the EIS. AES Report 10–15; Minn. R. § 4410.2300(G).

Mitigation measures recommended by AES include replanting, monitoring, and financial assurance requirements. AES Report 10–15. Specifically, the reclamation plan should include more stringent replanting requirements. *Id.* There should be more specificity in the type of tree, shrub, and grass plantings to be used. *Id.* Multiple species of trees should be used to avoid susceptibility to disease. *Id.* Specific performance standards should be included to assure that replanting provides the expected remediation and should include extended monitoring and management of plantings and reclamation for at least five years. *Id.* Tiller should be required to provide sufficient financial assurances to guarantee complete implementation of reclamation and monitoring in the event the reclamation is abandoned. *Id.*

### Conclusion

The DEIS should be revised to include consideration of the impacts and alternatives identified in this Comment as required by MEPA. Minn. R. § 4100.2600. The final EIS should consider in detail the impact on property values, the impact on traffic, and the impact on the environment as detailed in this Comment and in the Expert Reports. In addition, the final EIS should consider an alternative site, a reclamation-only alternative, and an alternative mine layout. Minn. R. § 4410.2300. Finally, the final EIS should consider the mitigation measures detailed in the AES Report. Failure to include detailed consideration of these issues in the final EIS will result in a document that does not meet the requirements of MEPA. Minn. Stat. § 116D.04, Subd. 2a; Minn. R. § 4410.2300.

Sincerely,



Kieran P. Dwyer

KPD/aj  
Enclosures