

FINDINGS OF FACT And CONCLUSIONS

Trunk Highway 1/169 Eagles Nest Lake Area Project

State Project No. 6904-46

**Prepared by:
Minnesota Department of Transportation**



June 2015

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FINDINGS OF FACT AND CONCLUSIONS

TRUNK HIGHWAY 1/169 EAGLES NEST LAKE AREA PROJECT

Located in:
St. Louis County, Minnesota

1.0 STATEMENT OF ISSUE

The proposed project will address deteriorating pavement conditions and provide safety improvements to a 5.7 mile long segment of Trunk Highway 1/169 (Highway 1/169) in the vicinity of Eagles Nest Lake [from approximately 0.1 mile west of Sixmile Road to approximately 0.1 mile east of Bradach Road] in rural St. Louis County, Minnesota. Approximately 3.5 miles of the roadway at the east end of the project will be reconstructed on/directly adjacent to the existing roadway alignment, while the western approximately 2.2 miles will be constructed on new alignment located south of the existing roadway.

Preparation of an Environmental Assessment Worksheet (EAW) is required for this project under Minnesota Rules 4410.4300, Subpart 22.A, for construction of a road on a new location over one mile in length. The Minnesota Department of Transportation (MnDOT) is the project proposer. MnDOT is also the Responsible Governmental Unit (RGU) for review of this project, as per Minnesota Rules 4410.4300, Subpart 22.A.

MnDOT's decision in this matter shall be either a negative or a positive declaration of the need for an environmental impact statement. MnDOT must order an Environmental Impact Statement (EIS) for the project if it determines the project has the potential for significant environmental effects.

Based upon the information in the record, which is comprised of the Environmental Assessment/Environmental Assessment Worksheet (EA/EAW) for the proposed project, related studies referenced in the EA/EAW, written comments received, responses to the comments, and other supporting documents included in this Findings of Fact and Conclusions document, MnDOT makes the following Findings of Fact and Conclusions:

2.0 ADMINISTRATIVE BACKGROUND

2.1 The Minnesota Department of Transportation is the Responsible Governmental Unit and project proposer for the Highway 1/169 Eagles Nest Lake Area Project. A combined Federal Environmental Assessment and State Environmental Assessment Worksheet (EA/EAW) has been prepared for this project in accordance with Minnesota Rules Chapter 4410 and the National Environmental Policy Act (NEPA) (42 USC 4321 et. seq.). The EA/EAW was developed to assess the impacts of the project and other circumstances in order to determine if an Environmental Impact Statement (EIS) is indicated.

2.2 The EA/EAW was filed with the Minnesota Environmental Quality Board (EQB) and circulated for review and comments to the required EAW distribution list. A “Notice of Availability” was published in the EQB Monitor on December 22, 2014. A press release was distributed to local media outlets and legal notices were published in the Mesabi Daily News, (December 30, 2014 and January 13, 2015); the Timberjay Newspaper (January 9, 2015); and the Ely Echo Newspaper (December 27, 2014). Appendix A contains copies of the affidavits of publication for the legal notices. A notice was also published on the project web page at <http://www.dot.state.mn.us/d1/projects/Hwy169eagles/>. These notices provided a brief description of the project and information on where copies of the EA/EAW were available and invited the public to provide comments that would be used in determining the need for an EIS on the proposed project.

2.3 A public hearing/open house meeting was held on January 21, 2015 at the Vermilion Community College in Ely, MN. Additional information pertaining to the publication of the EA/EAW and the public hearing/open house meeting is located in Appendix A.

2.4 The EA/EAW was made available for public review at the Ely Public Library, Duluth Public Library, and MnDOT District 1 Offices in Duluth and Virginia. Comments were received through Friday, January 30, 2015.

2.5 Nearly 200 agency and public citizen comments were received during the EA/EAW comment period. All comments received during the EA/EAW comment period were considered in determining the potential for significant environmental impacts. Comments received during the comment period and responses to substantive comments are provided in Appendix B.

3.0 FINDINGS OF FACT

3.1 Project Description

3.1.1 Existing Conditions: Highway 1/169 is currently a 2-lane roadway with a posted speed limit of 55 mph. The existing roadway section typically has 12-foot driving lanes and 2-3 foot wide paved shoulders and approximately 1-foot of gravel shoulder. Seven at-grade public road intersections are located along the corridor. Section II Purpose and Need of the EA/EAW describe the existing roadway conditions that resulted in initiation of the proposed project.

3.1.2 Proposed Project: Alternative 3A (Partial New Alignment Plus Construct Under Traffic) has been identified as the Preferred Alternative for this project. From the west, Alternative 3A begins approximately 0.1 miles west of Sixmile Lake Road and continues east to approximately 0.1 miles east of Bradach Road. The total project length is approximately 5.7 miles of which 3.5 miles are on the existing highway corridor and 2.2 miles are on a new alignment. The Preferred Alternative is a 2-lane rural highway section with a 55 mph design speed. The roadway typical section includes 12-foot driving lanes, 8-foot (6-foot paved and 2-foot gravel) outside shoulders, recoverable ditch slopes (4:1) where possible, and wide clear zones. Right turn/bypass lanes will be included at key intersections. The rural highway section includes adjacent grass drainage ditches that will collect, infiltrate, and convey roadway runoff. Figures 1 through 5, located in Appendix C, depict the preliminary design of the Preferred Alternative.

Beginning from the west project termini (near Sixmile Lake Road), the Preferred Alternative will follow the existing Highway 1/169 alignment for a short distance before splitting from the existing alignment onto a new southerly alignment for approximately the western third of the project area. This portion of the Preferred Alternative will provide extended passing opportunities in both southbound and northbound directions. The construction of a new alignment in this area requires clearing of existing vegetation and bedrock excavation in order to construct the highway alignment to improve safety. A new intersection will be constructed where the new Highway 1/169 alignment intersects Sixmile Lake Road. The old highway will also be connected to this new intersection. Portions of the existing Highway 1/169 located north of the proposed new alignment are expected to be conveyed to a local jurisdiction (county or township) and remain in-place to provide access to existing private properties. Other portions of the existing roadway may be utilized as part of the future Mesabi Regional Trail corridor that is in the early planning stages for expanding the trail through the Eagles Nest Lake area, if the Trail planning has progressed far enough to define if/how it would utilize the abandoned roadway. If the Trail plans are still undefined at time of final design for the Highway 1/169 project or if the Trail does not need the old roadbed, the final plans for the project would include removal of the existing pavement surface in locations where the roadway is not needed for local access. In locations where the pavement is removed the roadway corridor would be planted with native vegetation. The final design plans will further define the treatment for the portion of the existing highway corridor that will no longer be utilized as a result of the new alignment for the Preferred Alternative.

The Preferred Alternative rejoins the existing highway alignment just east of milepost 271 (see Figure 3). From this point the Preferred Alternative utilizes the existing highway alignment to the extent possible, but does require minor alignment shifts to the north and south in order to allow the transportation improvements to be constructed under traffic. These alignment shifts require bedrock excavation and vegetation clearing, but also enable traffic to remain on the existing lanes while the new highway section is being built. Once the new highway section is complete in this area, portions of the old highway (pavement and roadbed) may be removed and restored with native vegetation. Within the central portion of the Preferred Alternative (Figures 3 and 4), intersection improvements are proposed at County Road (CR) 599, CR 128/Bear Head Lake State Park Road, and CR 408. These improvements include turn and/or bypass lanes, which will enhance corridor mobility and improve safety conditions.

The eastern third of the Preferred Alternative (Figures 3 – 5) again utilizes the existing highway alignment to the extent possible, but does require minor alignment shifts in order to allow the corridor remain open to traffic during construction. Again several areas of bedrock excavation and vegetation clearing is required. Due to greater levels of development (primarily near Armstrong Lake and Clear Lake), several driveway modifications will be required to match the new highway alignment.

3.2 Additional Information Regarding Items Discussed in the EA/EAW Since It Was Published

Since the EA/EAW was published, the following information pertaining to the project has been added or updated:

3.2.1 The Section 404 permit application and Minnesota WCA application for a replacement plan decision have been drafted and submitted to the US Army Corps of Engineers (USACE) and MnDOT, respectively, for review, comment, and public notification. The proposed wetland mitigation for this project follows the approach in the St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota (USACE 2009) and the Minnesota WCA Rules, which require mitigation ratios of 1:1 to 1.5:1, depending on the location of the mitigation site. Wetland impacts will occur in Bank Service Area (BSA) 2 and Major Watershed 73 (Vermilion River). Wetland mitigation for wetland impacts associated with the Preferred Alternative will likely be mitigated through debit of suitable credits from bank accounts in BSAs 1, 3, or 5.

3.2.2 On March 6, 2015 correspondence was received from the USACE regarding the information provided in the EA/EAW and outlining the agency's expectations for project permitting and for concurrence point #4 in the NEPA/Section 404 merger process [see Appendix D].

3.2.3 On December 16, 2014, a letter was received from the US Fish & Wildlife Service (USFWS) regarding Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C., 1531 et seq.) [see Appendix D]. The letter was in response to MnDOT's determination and request for concurrence [December 11, 2014 letter in Appendix E of the EA/EAW] that the proposed project "may affect but is not likely to adversely affect" the Canada lynx (a federally-threatened species) and its critical habitat. The USFWS concurred with MnDOT's determination. The USFWS letter also responded to MnDOT's request for an informal conference on the Northern long-eared bat (NLEB), which was proposed for federal listing under the Endangered Species Act (ESA) at the time of EA/EAW publication. Since the EA/EAW was published, the NLEB has officially been listed under the ESA (as of May 4, 2015). The USFWS is still accepting public comments on the interim 4(d) rules regarding activities in NLEB habitat through July 1, 2015. As noted in the correspondence between MnDOT [December 11, 2014 letter in Appendix E of the EA/EAW] and USFWS [December 16, 2014 letter in Appendix D of this Findings of Fact] for this project, consultation between MnDOT and USFWS under Section 7 of the Act to determine potential for effects and to discuss ways to avoid or minimize effects to the species will continue, now that the species has been listed. This consultation will take into account updated information on the project plans and the USFWS finalization of the 4(d) rules.

3.2.4 Additional Section 7 determinations: A recent federal court decision relisted gray wolves (*Canis lupus*) in the western Great Lakes area (including Michigan, Minnesota, and Wisconsin) under the Endangered Species Act, effective December 19, 2014. The Highway 1/169 Eagles Nest Lake area project will occur within both the distribution range and within designated critical habitat for the gray wolf. MnDOT made the determination that the project may affect, but is not likely to adversely affect the gray wolf or result in the adverse modification of designated critical habitat. A copy of MnDOT's determination regarding the wolf and request for concurrence from the USFWS (e-mail correspondence dated February 2, 2015) is included in Appendix D. On March 11, 2015 USFWS concurred with MnDOT's determination.

Also, in December 2014 the federal status of the Rufa red knot (*Calidris canutus rufa*)

was changed from Proposed Threatened to Listed Threatened. In the February 2, 2015 e-mail correspondence, MnDOT also notified USFWS of the updated determination regarding the rufa red knot, i.e., that a determination of ‘no effect’ was made.

3.2.5 Updated information regarding Geology: Some comments received on the EA/EAW indicated that some of the information presented in Section V.A.10.a. Geology of the EA/EAW was not clear or was misunderstood by the public. As a result, this section of the EA/EAW was revised to clarify the points raised in the public comments. The revised section is included in Appendix E3.

3.2.6 Updated information regarding Geology: Since the publication of the EA/EAW, additional reports related to Section V.A.10.a. Geology have been produced. These new reports include: Severson, M.J. and Heine (2015) and Golder Associates (2015). Appendix E1 includes a list of the geologic studies and memoranda related to the Highway 1/169 project, incorporated by reference into the project record, and updated to include these additional reports. Two Golder Associates 2015 memoranda, which contain information particularly relevant to comments received on the EA/EAW, are included in Appendix E2. The Severson/Heine 2015 report is not attached to this Findings document because the report covers field work that was performed in the vicinity of the west end of the Alternative 1 corridor, which is not pertinent to the Preferred Alternative (Alternative 3A). The report will be made available to the public, upon request, by the MnDOT project manager.

3.2.7 Updated information regarding Geology: Since the publication of the EA/EAW, the process [described in EA/EAW Section V.A.10.a. Geology – Recommendations] for avoiding/minimizing/mitigating the potential production of acid rock drainage (ARD) from the project has been initiated with the formation of a Technical Working Group (TWG). The TWG includes members from Minnesota Department of Natural Resources (MnDNR), Minnesota Pollution Control Agency (MPCA), Minnesota Department of Health (MDH), US Environmental Protection Agency (USEPA), Federal Highway Administration (FHWA), MnDOT and ARD expert consultant Dr. Rens Verburg from Golder Associates. Each of the regulatory agencies has technical expertise pertinent to the potential for ARD issues; in addition the MnDNR and MPCA have Public Waters and NPDES Construction Stormwater permitting authority, respectively, over the project. The Golder Associates consultant staff has national and international experience with sulfide rock issues and BMPs/mitigation measures to avoid and minimize impacts.

The objective of the TWG is to work cooperatively on a multi-phase science-based plan to address ARD-related issues for the project, phases to include a material characterization work plan for bedrock excavated for the project, and development of a mitigation plan (including development of best management practices [BMPs]) based on the results of all of the material characterization work. The TWG began meeting in February 2015 and will continue its work, as needed, throughout project construction.

3.2.8 Updated information regarding Geology: As part of analysis prepared for the TWG, MnDOT re-checked the rock excavation quantities for the entire length of the Preferred Alternative (Alternative 3A) and determined that the estimate included in the

EA/EAW [for the eastern portion of the project, on the existing alignment (see Figure 9 of the EA/EAW)] was approximately 70,000 cubic yards less than the current computation of rock excavation. In order to present an accurate relative comparison of the alternatives evaluated in the EA/EAW, the rock excavation quantities for all of the EA/EAW alternatives were re-checked. The revised rock excavation estimates are included in revised EA/EAW Tables 1 and 3 and Figure 10, included in Appendix E4 of this Findings document.

This rock excavation quantity re-check determined that the estimate for Alternative 1 in the EA/EAW was approximately 76,000 cubic yards less than the revised estimate, so the relative difference between Alternative 1 and the Preferred Alternative remains the same. Therefore, these revised estimates do not change the overall rationale for selection of Alternative 3A as the Preferred Alternative, because the main reasons for selection Alternative 3A (as described on pages 30-31 of the EA/EAW) do not change as a result of this revised information, especially since 1) since Alternative 1 rock excavation estimate also increased by over 70,000 cubic yards and 2) rock excavation volume was not a key differentiating factor among alternatives (as described on page 31 of the EA/EAW).

Also, the increase in estimated rock excavation does not change the ‘Recommendations’ or ‘Conclusions’ regarding rock excavation described on pages 61 and 62, respectively, of the EA/EAW. The process for addressing ARD-related issues described in the ‘Recommendations’ section will not change with a change in the estimated amount of rock excavated; and, therefore, the ‘Conclusions’ regarding the ability to address ARD-related issues on this project would not change.

3.2.9 Updated information regarding Groundwater [Section V.A.11.a.ii. of the EA/EAW]: The Minnesota Department of Health (MDH) comment letter on the EA/EAW [see Appendix B1] included additional information on private wells in the project vicinity and information on the Drinking Water Supply Management Area (DWSMA) for Tower-Breitung. The eastern edge of the DWSMA is at the very western edge of the project area.

3.2.10 Updated information regarding Section V.A. 11.a.i. Water Resources of the EA/EAW: In addition to Armstrong Lake, which was identified in Section V.A.11.a.i of the EA/EAW as being on the MPCA’s 2014 list of Impaired Waters (for mercury), the MPCA noted in their comment letter that two additional lakes downstream from the project are also listed as “impaired” for mercury in fish tissue: West Robinson Lake (69-0217), and Lake Vermilion East (69-0378-01).

3.2.11 Updated information regarding Stormwater [Section V.A.11.a.ii. of the EA/EAW]: Additional stormwater infiltration facilities have been incorporated into the project design since publication of the EA/EAW, to address the NPDES permit process requirements for infiltration. The addition of these facilities resulted in a minor (approximately 0.3 acres) increase in anticipated land disturbance during construction [included in the project construction limits shown in the figures in Appendix C of this Findings document] within the approximately 0.5 acres of

additional right-of-way acquisition [described in Section 3.3.1.11 below]. The 0.3 acres of additional land disturbance would not occur within wetland or forested areas.

3.3 Findings Regarding Criteria for Determining the Potential for Significant Environmental Effects

Minnesota Rules 4410.1700 provides that an environmental impact statement shall be ordered for projects that have the potential for significant environmental effects. In deciding whether a project has the potential for significant environmental effects, the following four factors described in Minnesota Rules 4410.1700, Subp.7 shall be considered:

- A. type, extent, and reversibility of environmental effects;
- B. cumulative potential effects. The RGU shall consider the following factors: whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect; and the efforts of the proposer to minimize the contributions from the project;
- C. the extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority. The RGU may rely only on mitigation measures that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project; and
- D. the extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs.

MnDOT's key findings with respect to each of these criteria are set forth below:

3.3.1 Type, Extent, and Reversibility of Impacts

MnDOT finds that the analysis completed during the EA/EAW process is adequate to determine whether the project has the potential for significant environmental effects. The EA/EAW describes the type and extent of impacts anticipated to result from the proposed project. In addition to the information in the EA/EAW, the additional information described in Section 3.2 of this Findings of Fact and Conclusions document as well as the public/agency comments received during the public comment period [see Appendix B] were taken into account in considering the type, extent and reversibility of project impacts. Following are the key findings regarding potential environmental impacts of the proposed project and the design features included to avoid, minimize, and mitigate these impacts:

3.3.1.1 Geology

The project is situated within bedrock formations that have been identified to contain sulfide-bearing minerals that could potentially weather (i.e., undergo a chemical transformation) when rock is excavated for construction of the proposed project, potentially resulting in release of acidity (i.e., acid rock drainage [ARD]) that could affect

area water resources. To better understand the potential for ARD creation in the project area and how the potential for ARD could be minimized/mitigated, MnDOT conducted background research, field data collection and coordination discussions with regulators (MPCA and MnDNR) and technical experts. A technical memorandum summarizing this work was prepared (see the Sulfide/Acid Rock Drainage Technical Memorandum in Appendix C of the EA/EAW). Additional information regarding Geology/ARD is described in Section 3.2 of this Findings of Fact document.

This research and coordination with MnDNR and MPCA resulted in agreement that the risk for ARD generation from the project could be managed by following an agreed-upon process for further investigating and characterizing rock within the preferred alternative alignment, and for defining plans and practices to avoid/minimize and mitigate the potential for ARD (described in detail in the Technical Memorandum) so that there would be no significant impacts to water quality/surface water resources from the proposed project. MnDOT is committed to following this process, including additional coordination with regulatory agencies and technical experts, which is similar to processes used by other state departments of transportation for managing ARD where sulfide-containing rock occurs. The process has been initiated in February 2015 with the formation of the TWG (described in Section 3.2.7 above). This process will continue, as needed, through project construction.

By using this coordination process and incorporating appropriate best management practices to avoid, minimize and mitigate potential impacts into the project, there is not a potential for significant impacts related to ARD.

3.3.1.2 Surface Water Bodies

The Armstrong River flows from Armstrong Lake located immediately south of the highway corridor to Lake Vermilion (378P), which is located northwest of the study area. This is the only surface water body impacted by the proposed project. The river currently passes under Highway 1/169 (via a large culvert). This culvert may be able to remain in place and be extended approximately 65 feet on the upstream end to accommodate the proposed roadway changes; or it may need to be replaced with a 130 foot culvert in its current location, depending on the final roadway grades in this area. During the final design phase a detailed hydraulic analysis will be conducted to ensure proper sizing and placement of the conveyance structure. A Public Waters Permit will be required from the DNR, and the permit conditions will be incorporated into the project as it is constructed.

3.3.1.3 Groundwater

No wells are known to exist within the existing or proposed right-of-way limits. If any unused or unsealed water wells are discovered in the project area during construction, they will be addressed in accordance with Minnesota Rules, Chapter 4725.

The eastern edge of the Drinking Water Supply Management Area (DWSMA) for Tower-Breitung is at the very western edge of the project area. The MDH has noted that if ARD were to be generated by the project it could affect the DWSMA and/or private wells in the project vicinity. As described in Section 3.3.1.1 above, a coordination process for addressing the potential risk of ARD has been identified and is being implemented. As part

of the TWG, MDH staff can provide input into the process, including the identification of best management practices to avoid, minimize and mitigate potential project impacts related to ARD.

3.3.1.4 Wetlands

A wetland technical evaluation panel (TEP) meeting has been held to discuss the project and potential impacts to wetlands. The Preferred Alternative will have approximately 10.9 acres of wetland impacts. The Section 404 permit has been drafted and submitted to the USACE. A wetland mitigation plan for replacement of the affected wetland areas will be developed consistent with the Section 404 permit and the current Wetland Conservation Act (WCA) regulatory requirements. Wetland impacts will occur in Bank Service Area (BSA) 2 and Major Watershed 73 (Vermilion River). Wetland mitigation for wetland impacts associated with the Preferred Alternative will likely be mitigated through debit of suitable credits from bank accounts in BSAs 1, 3, or 5. The proposed wetland mitigation follows the approach in the St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota (USACE 2009) and the Minnesota WCA Rule as amended in August 2009.

3.3.1.5 Stormwater Management / Water Quality

The Preferred Alternative will result in an increase in impervious area. The project will require a National Pollutant Discharge Elimination System (NPDES) Construction Stormwater permit. The Preferred Alternative includes vegetated side slopes, grassed roadside ditches, and sediment filtration basins – including infiltration facilities not previously included in the EA/EAW (see update in Section 3.2.11 of this Findings document) – to detain and infiltrate runoff, consistent with the requirements of the NPDES permitting process. Plans for detention and infiltration of runoff will continue to be refined and revised during project final design, as needed to meet NPDES Permit process requirements.

3.3.1.6 Erosion and Sedimentation

Erosion and sedimentation of all exposed soils within the project corridor will be minimized by employing best management practices (BMPs) during construction. Ditches, dikes, silt fences, bale checks, and temporary seeding/mulching are some of the typical temporary erosion control measures that will be used during construction. Temporary and permanent erosion control plans will be identified in the final construction plans, as required by the NPDES permit and the required Storm Water Pollution Prevention Plan (SWPPP). Erosion control measures will be in place and maintained throughout the entire construction period. Removal of erosion control measures will not occur until all disturbed areas have been stabilized.

In addition, at the start of the project, BMPs to prevent sediment from entering wetlands, Armstrong River, Clear Lake, and Armstrong Lake will be installed in accordance with the permit requirements. These practices will be maintained or improved as needed for the duration of the project.

3.3.1.7 Contamination / Hazardous Materials and Wastes

There were no properties with a medium or high risk for contamination within the project vicinity. If needed, further evaluation of properties identified within the construction limits

(identified as low risk contamination sites) will occur during the final design and prior to right-of-way acquisition. If necessary, response action plans or special provisions will be developed for properly handling any materials during construction. Any soil and groundwater handling activities would be coordinated with appropriate local, state, and federal regulatory agencies. MnDOT will work with the MPCA Voluntary Investigation and Cleanup (VIC) Unit and/or the Voluntary Petroleum Investigation and Cleanup (VPIC) Unit, if appropriate.

3.3.1.8 Vegetation

No unique or rare vegetation types would be affected by the Preferred Alternative. However, the proposed improvements will impact approximately 75 acres of wooded/forest land and approximately 11 acres of wetlands. The highway clear zone (unobstructed area adjacent to the highway) will be cleared of all trees and maintained as grassed open space to maximize safety conditions for vehicles that may inadvertently leave the roadway. All disturbed areas within the construction limits will be re-vegetated using a native seed mix. Segments of the existing roadbed that are abandoned following construction will include removal of the existing pavement surface and would be planted with native vegetation.

3.3.1.9 Fish, Wildlife, and Sensitive Ecological Resources (rare features)

The project would impact approximately 75 acres of forest land and 11 acres of wetland. Areas disturbed by construction of the project improvements will be re-vegetated using seed mixes that are comprised of native plant species. Water quality treatment in the form of grass side slopes, grass swales, and infiltration areas have been incorporated into the highway section to collect, convey, and treat surface water prior to discharging to receiving water bodies. MnDOT has also coordinated with resource agencies regarding wetland impacts. These efforts and others are intended to minimize and mitigate potential impacts to fish, wildlife, and ecologically sensitive resources present in the study area.

The project will also cross over Armstrong River at the location of the existing crossing. The project proposes extending the existing culvert. If during final design it is determined that the culvert cannot be extended the entire structure will be replaced with a new box culvert. MnDOT will continue to coordinate with the MnDNR (as part of obtaining a Public Waters Permit) to ensure fish passage is maintained at the crossing and impacts to fish habitat are minimized.

The project county (St. Louis County) is within the distribution range of federally-listed threatened and endangered species. MnDOT has made determinations of potential effect regarding the Canada lynx and gray wolf species (may affect but not likely to adversely affect) and received concurrence from USFWS (see EA/EAW Item. 13 and Sections 3.2.3 and 3.2.4 of this Findings of Fact). As discussed in Section 3.2.3 above, consultation between MnDOT and USFWS under Section 7 of the Endangered Species Act to determine potential for effects and to discuss ways to avoid or minimize effects to the Northern long eared bat will continue, as described in the correspondence between the two agencies (see Section 3.2.3), since the species has recently been listed. This consultation will take into account updated information on the project plans and the USFWS finalization of the 4(d) rules.

3.3.1.10 Noise

State nighttime standards are exceeded at 20 receptor locations within the project area. These receptor locations are generally on the east end of the project study area near Clear Lake, where the proposed project generally follows the existing roadway alignment. Additionally, along the new alignment section in the western segment of the corridor there are 4 additional receptor locations that will experience a modeled increase in noise levels exceeding 5 dBA. These receptors are on the north side of Sixmile Lake. This is adjacent to the portion of the project where the roadway is proposed to be realigned the furthest distance to the south.

An analysis of noise barrier mitigation for eleven impacted areas along the project corridor demonstrated that barriers will not meet MnDOT's cost-reasonableness criteria at any of the areas. Therefore, noise barrier mitigation is not proposed for this project.

3.3.1.11 Right-of-way Impacts

No commercial or residential relocations are anticipated. The project is expected to require acquisition of approximately 0.5 acres of additional right-of-way (not described in the EA/EAW) for an infiltration facility (see Section 3.2.11), in addition to the 86 acres of right-of-way acquisition described in the EA/EAW. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and 49 CFR Part 24 will be followed for the project, to compensate landowners for property acquired for this project.

3.3.1.12 Land Use

The land use within the project vicinity is primarily open space consisting of forestlands, grasslands and water resources (wetlands, lakes). Scattered low density developments of rural residential units and seasonal residents surrounding lakes are also present in the project vicinity. Because mining activity has become an issue of public interest in northeastern Minnesota in recent years, available information on current and potential future mining activity was also reviewed. Although the TH 1/169 project corridor goes through or nearby parcels of land that have active state mineral leases, no mining activity is occurring or is proposed in the immediate project vicinity. Assessment of the preferred alternative corridor by a geologist consultant to MnDOT found no evidence for economically viable minerals within the project corridor.

The project is compatible with nearby land uses, and is not likely to result in substantive changes in land use or land uses that are incompatible with current land use and zoning. The roadway improvements at the eastern two-thirds of the project corridor are essentially on the same alignment as the existing roadway, and would not result in relocations or other changes in land use at any existing developed parcels. The western third of the project includes construction of a new roadway alignment through undeveloped, primarily forested land. A review of the existing development patterns in the project vicinity – i.e., development of land is occurring primarily along lakeshore areas, not in forested areas -- suggests that this new roadway alignment is not likely to result in substantial changes in adjacent land uses or increased development, since the new alignment does not provide access to lakefront property. If a landowner wanted to develop a parcel along the new or

existing highway alignments, they would need to get permit/approval from the local government and would need to request an access permit from MnDOT for highway access.

3.3.1.13 Summary finding with respect to this criteria: MnDOT finds that the Project, as it is proposed, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts to the resources evaluated in the EA/EAW and in the Findings summary above. Project impacts will be mitigated as described in the EA/EAW and in the Findings above.

3.3.2 Cumulative Potential Effects of Related or Reasonably Foreseeable Future Projects

3.3.2.1 The area immediately adjacent to the project is generally undeveloped with forestlands, grasslands, wetlands, and lakes comprising the majority of the rural landscape. Moderate lakeshore development is found near the eastern limits of the project near Armstrong Lake and Clear Lake. According to information received from St. Louis County and Eagles Nest Township, no substantial future development plans in the surrounding area have been identified. Any future land use changes in the area will be regulated by St. Louis County land use development standards (e.g. zoning and subdivision ordinances).

3.3.2.2 Other foreseeable future infrastructure projects, including preservation and bridge/culvert replacement projects on Highway 1 and 169 have been considered in the assessment of cumulative potential effects. As described on pages 138 through 144 in the EA/EAW, no potentially significant cumulative effects from the proposed project and other reasonably foreseeable future actions were identified.

3.3.3 Extent to Which the Environmental Effects are Subject to Mitigation by Ongoing Public Regulatory Authority

3.3.3.1 The mitigation of environmental impacts will be designed and implemented in coordination with regulatory agencies (including the coordination and approvals described in Section 3.3.1 above) and will be subject to the plan approval and permitting processes. Permits and approvals that have been obtained or may be required prior to project construction include those listed in Table 1.

3.3.3.2 The permits listed in Table 1 include general and specific requirements for mitigation of environmental effects of the project. Therefore, MnDOT finds that the environmental effects of the project are subject to mitigation by ongoing regulatory authority.

Table 1– Agency Approvals and Permits

Unit of Government	Type of Application/Permit	Status
Federal Agency		
Federal Highway Administration	Environmental Assessment Approval	Completed
	EIS Need Decision	Pending
	Section 106 Determination	Complete
U.S. Army Corps of Engineers	Section 404 Permit – Individual Permit (IP)	Submitted

Unit of Government	Type of Application/Permit	Status
U.S. Fish & Wildlife Service	Endangered Species Act Section 7 Determination	On-going
State Agency		
MnDOT	Environmental Assessment Approval	Completed
	EIS Need Decision	Pending
	Minnesota Wetland Conservation Act	Submitted
MN Department of Natural Resources	State Endangered Species Review	Completed
	Public Waters Work Permit	To be requested
	Water Appropriations Permit	To be requested
Minnesota Pollution Control Agency	National Pollutant Discharge Elimination System Construction Storm Water Phase II Permit	To be requested
	401 Water Quality Certification	To be requested

3.3.4 Extent to Which Environmental Effects can be Anticipated and Controlled as a Result of Other Environmental Studies

3.3.4.1 MnDOT has extensive experience in roadway construction. Many similar projects have been designed and constructed throughout the area encompassed by this governmental agency. All design and construction staff are very familiar with the project area.

3.3.4.2 The potential presence of sulfide-bearing minerals in rock within the project area has been identified (see Section 3.3.1.1 above). The potential for ARD generation and related impacts can be anticipated and controlled through the coordination process MnDOT is using, described in Section 3.2.7. As noted, the TWG for this process includes staff from state agencies (MPCA and MnDNR) with experience with sulfide rock in Minnesota, expert consultant staff from Golder Associates, and staff from other state and federal agencies with expertise in water quality. The Golder Associates consultant staff has national and international experience with sulfide rock issues and BMPs/mitigation measures to avoid and minimize impacts, including experience assisting Pennsylvania and Tennessee Departments of Transportation with road projects that encountered sulfide rock. By using this process and implementing BMPs and mitigation into the project, MnDOT can anticipate and control potential effects related to sulfide-bearing rock.

3.3.4.3 With the exception of the sulfide-bearing rock issue which can be addressed as described in Section 3.3.4.2, no other problems are anticipated which the MnDOT staff have not encountered and successfully solved many times in similar projects in or near the project area. MnDOT finds that the environmental effects of the project can be anticipated and controlled as a result of the assessment of potential issues during the environmental review process and MnDOT's experience in addressing similar issues on previous projects.

4.0 CONCLUSIONS

1. The Minnesota Department of Transportation has jurisdiction in determining the need for an environmental impact statement on this project.
2. All requirements for environmental review of the proposed project have been met.
3. The EA/EAW and the permit development processes to date related to the project have generated information which is adequate to determine whether the project has the potential for significant environmental effects.
4. Areas where potential environmental effects have been identified will be addressed during the final design of the project. Mitigation will be provided where impacts are expected to result from project construction, operation, or maintenance. Mitigative measures will be incorporated into project design, and have been or will be coordinated with state and federal agencies during the permit processes.
5. Based on the criteria in Minnesota Rules part 4410.1700, subp. 7, the project does not have the potential for significant environmental effects.
6. An Environmental Impact Statement is not required for the Trunk Highway 1/169 Eagles Nest Lake Area Project.
7. Any findings that might properly be termed conclusions and any conclusions that might properly be called findings are hereby adopted as such.

Based on the Findings of Fact and Conclusions contained herein and on the entire record:

The Minnesota Department of Transportation hereby determines that the Trunk Highway 1/169 Eagles Nest Lake Area Project will not result in significant environmental impacts, and that the project does not require the preparation of an environmental impact statement.

For Minnesota Department of Transportation



Lynn P. Clarkowski, PE
Chief Environmental Officer
Director, Office of Environmental Stewardship

6/5/2015

Date

APPENDIX A - Public Involvement: EA/EAW Comment Period

PUBLIC HEARING RECORD

EQB NOTICE OF AVAILABILITY

PUBLIC HEARING CERTIFICATE OF COMPLIANCE

NEWSPAPER LEGAL NOTICES

PUBLIC HEARING RECORD

A public hearing and open house for the Highway 1/169 Eagles Nest Lake Area Improvement Project was held as follows:

Wednesday, January 21, 2015, 6:00 p.m. to 9:00 p.m.,
Vermilion Community College
1900 East Camp Street
Ely, MN 55731

Over 75 individuals attended the public hearing/open house meeting. The purpose of the meeting was to provide an update on the project and receive comments on the EA/EAW. At the public hearing, attendees were invited to provide comments through one of two ways: written comments (on comment cards provided at the meeting) and oral statements to a certified court reporter. Copies of all written and oral testimonies are included in Appendix B along with responses to substantive comments.

Staff from MnDOT and their consultant were on hand at the public hearing/open house meeting to discuss the project and to answer questions. Several informational items regarding the project were made available at the meeting including the following:

- Open House Handout
- Project Display Boards
 - Existing Highway 1/169 Alignment Deficiencies
 - Existing Highway 1/169 Passing & Turning Lane Deficiencies
 - Build Alternatives Analyzed in the EA/EAW
 - What is an EA/EAW?
 - Preferred Alternative Environmental Effects Summary
 - Project Schedule
- Comment & Feedback Form
- Project Presentation (PowerPoint Slides and Presenters)

Following the project presentation at the public hearing/open house meeting, MnDOT allowed members of the audience to share their thoughts and concerns regarding the proposed transportation project improvements. It was made clear to those in attendance that these statements were not considered part of the official public hearing record, but rather an opportunity for an individual to share their thoughts and ideas about the project among neighbors, business owners, and other interested individuals.

Included on the following pages are copies of the newspaper legal notices and Minnesota Environmental Quality Board (EQB) Monitor publication that announced the availability of the EA/EAW and provided details of the public hearing/open house meeting.

EQB MONITOR NOTICE

improvements are included along Harpers Street between 125th Avenue NE/CSAH 14 and 126th Avenue NE. The improvements also include the construction of multi-use trails and sidewalks.

An Environmental Assessment Worksheet (EAW) has been prepared that describes the proposed project, impacts, and mitigation.

Copies of the EAW are available for public review beginning December 22, 2014, at the following locations:

- Anoka County Library – Blaine Branch, 711 County Road 10 NE, Blaine, MN 55434;
- City of Blaine – City Hall: Engineering Division, 10801 Town Square Drive NE, Blaine, MN 55449;
- Anoka County Highway Department – Building Lobby, 1440 Bunker Lake Blvd., Andover, MN 55304;
- Minneapolis Public Library, Technical & Science Division, Government Docs., 2nd Floor, 300 Nicollet Mall, Minneapolis, MN 55401-1992;
- <http://www.sehinc.com/online/blaine14>

RGU: Anoka County

Contact Person: Andrew Witter, P.E.
Anoka County Assistant County Engineer
1440 Bunker Lake Boulevard
Andover, MN 55304
Phone: (763) 862-4249
andrew.witter@co.anoka.mn.us

"To request this document in an alternative format, please contact the Affirmative Action Office at 651-366-4718 or 1-800-657-3774 (Greater Minnesota);

711 or 1-800-627-3529 (Minnesota Relay). You may also send an email to ADArequest.dot@state.mn.us.

(Please request at least one week in advance)."

Comment Deadline: January 30, 2015

Project Title: TH 1/169 Eagles Nest Lake Area Project ←

Project Description: The Minnesota Department of Transportation is proposing a transportation infrastructure maintenance and safety improvement project along 5.7 miles of TH 1/169. The project area extends from approximately 0.1 miles west of Sixmile Road to approximately 0.1 miles east of Bradach Road. The project includes pavement replacement, widening the shoulders, expanding the clear zones, adding turn/bypass lanes and passing opportunities, and realignment of portions of the highway.

The combined federal Environmental Assessment and State Environmental Assessment Worksheet (EA/EAW) describes the proposed project, impacts, and mitigation.

Copies of the EA/EAW are available for public review beginning December 22, 2014, on the project website at <http://www.dot.state.mn.us/d1/projects/Hwy169eagles/> and at the following locations:

- Ely Public Library, 224 East Chapman Street, Ely, Minnesota 55731
- Duluth Public Library, 520 W. Superior Street, Duluth MN 55802;
- MnDOT District 1 – Virginia Office Building Lobby, 101 N. Hoover Road, Virginia, MN 55792
- Minneapolis Public Library, Technical & Science Division, Government Docs., 2nd Floor, 300 Nicollet Mall, Minneapolis, MN 55401-1992;
- MnDOT Library, 395 John Ireland Boulevard, St. Paul, MN 55155

The EA/EAW comment period will begin on December 22, 2014. Written comments will be accepted through 4:30 p.m., on January 30, 2015. Comments should be submitted to the MnDOT District 1 Project Manager listed below. To afford an opportunity for all interested persons, agencies and groups to learn more about the project, a public hearing/informational meeting has been scheduled for Wednesday, January 21, 2015 at the Vermilion Community College – Room CL104, 1900 East Camp St., Ely, MN 55731. The open house style meeting will be held from 6:00 to 9:00 p.m., with a presentation at 7:00 p.m. MnDOT representatives will be present to answer questions and receive comments on the preferred alternative and the assessment of environmental impacts in the EA/EAW.

RGU: Minnesota Department of Transportation (MnDOT)

Contact Person: Michael Kalnbach, P.E.

Minnesota Department of Transportation, District 1 – Duluth
1123 Mesabi Avenue, Duluth, MN 55811
Phone: (218) 725-2745
michael.kalnbach@state.mn.us

"To request this document in an alternative format, please contact the Affirmative Action Office at 651-366-4718 or 1-800-657-3774 (Greater Minnesota);

711 or 1-800-627-3529 (Minnesota Relay). You may also send an email to ADArequest.dot@state.mn.us.

(Please request at least one week in advance)."



Notice

Minnesota Department of Agriculture Transgenic potato with low acrylamide potential and reduced black spot bruise - Commercial Use Exemption

Simplot Plant Sciences (J.R. Simplot Company) has requested an exemption from the Minnesota Department of Agriculture's Genetically Engineered Organism Release Permit for potato events designated as Innate™ potatoes (events E12, E24, F10, F37, J3, J55, J78, G11, H37, and H50). These genetic modifications result in potato lines with low acrylamide potential and reduced black spot bruise. A determination of non-regulated status has been issued by USDA. For additional information contact Dr. Steve Malone, Minnesota Department of Agriculture, 625 Robert St N., St. Paul, MN 55155, 651-201-6531, stephen.malone@state.mn.us

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

..... CERTIFICATE OF COMPLIANCE.....

MINNESOTA PROJECT NO. _____ STATE PROJECT NO. 6904-46

TRUNK HIGHWAY NO. 1/169 **OR** LOCAL AGENCY ROUTE NO. _____
(CSAH, MSAS, Other)

Being that section of the highway between approximately 0.1 miles west of Sixmile Lake Road to approximately 0.1 miles east of Bradach Road, in St. Louis County, the State of Minnesota.

In conformance with the requirements of SECTION 128, TITLE 23, UNITED STATES CODE, the undersigned does hereby certify that

_____ the public has been afforded an opportunity for a public hearing, **or**

X a public hearing was held

and that consideration has been given to the social and economic effects of the project, its impact on the environment, and its consistency with the goals and objectives of such urban planning as has been promulgated by the community.

The public was advised of the

_____ objectives of such a hearing, the procedures for requesting a hearing, the deadline for the submission of such a request, **or**

X time, place, and objectives of the hearing

by notices published in news media having a general circulation within the area of said project. Affidavit(s) of such publication is (are) enclosed herewith.

_____ The deadline date for the submission of a request for a hearing was _____ 20____,
or

X The hearing was held on January 21, 2015 in Ely, Minnesota.
(City, Township, Other)

Signed Quane R. Zild this 13th day of February 2015
MnDOT District Engineer

OR

Signed _____ this _____ day of _____ 20 ____
Local Agency Title:

NEWSPAPER LEGAL NOTICES

STATE OF MINNESOTA)
COUNTY OF ST. LOUIS)

)ss

LEGAL NOTICE
Highway 1/169 Eagles Nest Lake Area Project

The Minnesota Department of Transportation has initiated a transportation infrastructure maintenance and safety improvement project that includes pavement replacement, widening the shoulders, expanding the clear zones, adding turn/bypass lanes and passing opportunities and realignment of portions of the highway. The Eagles Nest Lake Area Project corridor extends along 5.7 miles of Highway 1/169 from approximately 0.1 miles west of Sirmile Road to approximately 0.1 miles east of Bradach Road. A combined Federal Environmental Assessment and State Environmental Assessment Worksheet (EA/EAW) has been prepared and is available for public and agency review and comment. The EA/EAW identifies the project purpose and need, alternatives considered, and identifies potential social, economic and environmental effects. The EA/EAW is available for review on the project website at http://www.dot.state.mn.us/1/169project/169169.html and at the following locations:
•Ely Public Library, 224 East Chapman Street, Ely, Minnesota 55731
•Duluth Public Library, 520 W. Superior Street, Duluth MN 55802
•MnDOT District 1 - Virginia Office Building Lobby, 101 N. Hoover Road, Virginia, MN 55792
•Minneapolis Public Library, Technical & Science Division, Government Docs, 2nd Floor, 300 Nicollet Mall, Minneapolis, MN 55401-1992;
•MnDOT Library, 395 John Ireland Boulevard, St. Paul, MN 55155;
To afford an opportunity for all interested persons, agencies and groups to learn more about the project, a public hearing/informational meeting has been scheduled for Wednesday, January 21, 2015 at the Vermilion Community College - Room CL104, 1900 East Camp St., Ely, MN 55731. The open house style meeting will be held from 6 to 9 p.m., with a presentation at 7 p.m. MnDOT representatives will be present to answer questions and receive public comments on the preferred alternative and the assessment of environmental impacts in the EA/EAW.

The deadline for submitting comments is 4:30 p.m. on Friday, January 30, 2015. All comments should be directed to: Michael Kalnbach, P.E., Minnesota Department of Transportation, District 1 - Duluth, 1123 Mesabi Avenue, Duluth, MN 55811. Email: michael.kalnbach@state.mn.us
To request this document in an alternative format, please contact the Affirmative Action Office at 651-366-4718 or call 1-800-657-3774 (Greater Minnesota). For Minnesota Relay, call 711 or 1-800-627-3529. You may also send an e-mail to ADArequest.dot@state.mn.us. (Please make your request at least one week in advance).
MDN: 12-30-2014; 1-13-2015

Mesabi Daily News
Affidavit of Publication

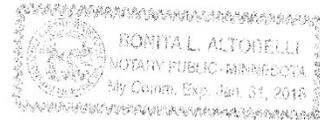
Nancy Novak, being duly sworn, on oath says that he/she is the publisher or authorized agent and employee of the publisher of the newspaper known as Mesabi Daily News, and has full knowledge of the facts which are stated below:
(A) The newspaper has compiled with all of the requirements constituting qualification as a qualified newspaper, as provided by Minnesota Statute 331A.02, 331A.07, and other applicable laws, as amended.
(B) The printed Legal Notice - Eagles Nest Lake Area Project which is attached was cut from the columns of said newspaper, and was printed and published on two occasions; it was first published on Tuesday, the 30th day of December, 2014 and was thereafter printed and published on Tuesday, the 13th day of January, 2015; and printed below is a copy of the lower case alphabet from A to Z, both inclusive, which is hereby acknowledged as being the size and kind of type used in the composition and publication of the notice.

abcdefghijklmnopqrstuvwxyz

BY: [Signature] Business Manager

Subscribed and sworn to before me on this 13th day of January, 2015

[Signature] Notary Public



LEGAL NOTICE

HIGHWAY 1/169 EAGLES NEST LAKE AREA PROJECT

The Minnesota Department of Transportation has initiated a transportation infrastructure maintenance and safety improvement project that includes pavement replacement, widening the shoulders, expanding the clear zones, adding turn/bypass lanes and passing opportunities and realignment of portions of the highway. The Eagles Nest Lake Area Project corridor extends along 5.7 miles of Highway 1/169 from approximately 0.1 miles west of Sixmile Road to approximately 0.1 miles east of Bradach Road.

A combined Federal Environmental Assessment and State Environmental Assessment Worksheet (EA/EAW) has been prepared and is available for public and agency review and comment. The EA/EAW identifies the project purpose and need, alternatives considered, and identifies potential social, economic and environmental effects. The EA/EAW is available for review on the project website at <http://www.dot.state.mn.us/d1/projects/Hwy169eagles/> and at the following locations:

- Ely Public Library, 224 East Chapman Street, Ely, Minnesota 5573
- Duluth Public Library, 520 W. Superior Street, Duluth MN 55802;
- MnDOT District 1 – Virginia Office Building Lobby, 101 N. Hoover Road, Virginia, MN 55792
- Minneapolis Public Library, Technical & Science Division, Government Docs., 2nd Floor, 300 Nicollet Mall, Minneapolis, MN 55401-1992;
- MnDOT Library, 395 John Ireland Boulevard, St. Paul, MN 55155;

To afford an opportunity for all interested persons, agencies and groups to learn more about the project, a public hearing/informational meeting has been scheduled for Wednesday, January 21, 2015 at the Vermilion Community College – Room CL104, 1900 East Camp St., Ely, MN 55731. The open house style meeting will be held from 6 to 9 p.m., with a presentation at 7 p.m. MnDOT representatives will be present to answer questions and receive public comments on the preferred alternative and the assessment of environmental impacts in the EA/EAW.

The deadline for submitting comments is 4:30 p.m. on Friday, January 30, 2015. All comments should be directed to: Michael Kalnbach, P.E., Minnesota Department of Transportation, District 1 – Duluth, 1123 Mesabi Avenue, Duluth, MN 55811, Email: michael.kalnbach@state.mn.us

To request this document in an alternative format, please contact the Affirmative Action Office at 651-366-4718 or call 1-800-657-3774 (Greater Minnesota). For Minnesota Relay, call 711 or 1-800-627-3529. You may also send an e-mail to ADArequest.dot@state.mn.us. (Please make your request at least one week in advance).

AFFIDAVIT OF PUBLICATION

STATE OF MINNESOTA)

) ss.

COUNTY OF ST. LOUIS)

Anne Swenson

being duly sworn, on oath says that he/she is the publisher or authorized agent and employee of the publisher of the newspaper known as the Ely Echo, has full knowledge of the facts which are stated below:

(A) The newspaper has complied with all of the requirements constituting qualification as a qualified newspaper, as provided by Minnesota Statute 331A.02, 331A.07, and other applicable laws, as amended.

(B) The printed Notice - Highway 1/169 Eagles Nest Project

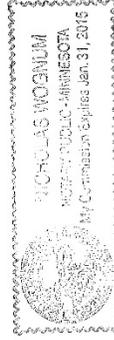
which is attached was cut from the columns of said newspaper, and was printed and published once each week, for one successive weeks; it was first published on Saturday, the 27th day of December 2014, and was thereafter printed and published on Saturday to and including Saturday, the day of 2014; and printed below is a copy of the lower case alphabet from A to Z, both inclusive, which is hereby acknowledged as being the size and kind of type used in the composition and publication of the notice:

*abcdefghijklmnopqrstuvwxyz

BY: Anne Swenson

TITLE: Publisher

Subscribed and sworn before me on this 29th day of December, 2014



[Signature]
Notary Public

RATE INFORMATION

- (1) Lowest Classified rate paid by commercial users for comparable space above matter \$9.60 inch rate \$10.30/col. inch - Echo
- (2) Maximum rate allowed by law for the above matter \$ 8.20/col. inch - Saver
- (3) Rate actually charged for the above matter \$9.60 inch rate

APPENDIX B – EA/EAW Comments and Responses

The EA/EAW for the Highway 1/169 Eagles Nest Lake Area Improvement Project was distributed on December 22, 2014 to agencies and organizations on the official distribution list, as well as additional agencies/organizations that had either requested a copy of the document, and/or that could be affected by the proposed project. The comment period for the EA/EAW officially closed at the end of the business day on January 30, 2015. A public hearing and open house to receive comments on the proposed project and EA/EAW was held on Wednesday, January 21, 2015 (see Appendix A to further details). At the public hearing, attendees were invited to provide comments through one of two ways: written comments and oral statements.

- Written Statements: Attendees were invited to submit written comments through January 30, 2015 on cards provided at the open house, in letter, or via e-mail.
- Oral Statements: Statements were recorded by a certified court reporter.

During the public review and comment period, FHWA and MnDOT received comments on the EA/EAW from a total of 198 agencies and individuals, including several oral statements that were received at the public hearing.

Consistent with state and federal environmental review rules, substantive comments received are responded to in this appendix, as part of the Findings of Fact and Conclusions for the project record. Specifically, responses have been prepared for substantive statements pertaining to analysis conducted for and documented in the EA/EAW, including: incorrect, incomplete or unclear information; permit requirements; content requirements. These comments and responses are included in Appendix B1 below. Written comments agreeing with the EA/EAW project information, general opinions, statements of fact, or statements of preference were not formally responded to, but are included in Appendix B2 below.

Appendix B1 – Substantive Comments and Responses to Those Comments

This section contains the comments and written responses to substantive comments received from the following individuals/agencies during the public comment period:

- Aiken County Engineer (John Welle)
- U.S. Environmental Protection Agency
- Minnesota Department of Health
- Minnesota Department of Natural Resources
- Minnesota Pollution Control Agency
- Dan Humay (part of the Public Hearing Transcript)
- Matt Oberhelman
- Linda Ross Sellner
- Terry Anderson (and 27 co-signators)
- Jim Barott
- Kurt Soderberg
- Chuck & Jacque Glass
- Steve Piragis
- Barbara Folz
- Dayna & Eric Mase
- Steven Lotz
- Dale Anderson
- Evelyn Anderson
- Larry Anderson
- William and Catherine Kemnitz
- Donald Pasanen

Appendix B2 – Other Comments Received

Listed below are the individuals and organizations who submitted comments during the public comment period which expressed an opinion about the merits of the proposed TH 1/169 Eagles Nest Lake Area Improvement Project and/or expressed “support” or approval of the project and/or Alternative 3A as the Preferred Alternative. No response has been provided for these statements of opinion.

1. City of Babbitt
2. City of Cook
3. City of Ely Resolution
4. City of Hoyt Lakes
5. City of Tower
6. City of Winton
7. Eagles Nest Township
8. Fall Lake Township
9. Morse Township
10. Ely Chamber of Commerce
11. Ely Area Development Association
12. Ely Public School (ISD 696)
13. Mountain Iron-Buhl-Mesabi Academy (ISD 712)
14. Saint Louis County Board
15. Brian Anderson
16. Kristin Anderson
17. Virginia Anderson
18. Jim Beaty
19. Brian Carlson
20. Ruth Carlson
21. Tony Colarich
22. Gregory Dostert
23. Bill Erzar
24. Dean Erzar
25. Tom Erzar
26. Albert Forsman
27. Bonnie Forsman
28. Jacob Forsman
29. Kyle Forsman
30. Mike Forsman
31. Karen Hill
32. Dale Hegfors
33. Michael Jankovec
34. Paul Johnson
35. Harold Langowski
36. Diane Lindroos
37. Robert Maki
38. Ray Marsnik
39. Valeda (Polly) McDonald
40. Hans Olsen
41. Caroline Owens
42. L.A. Phelps
43. Michael Pope
44. Chuck Renner
45. Roger J. Skraba
46. Rudy Semeja
47. Barb Soderberg
48. Shelly Voll
49. Joan Weckman
50. Larry & Patricia Wellvang
51. Percy (Priscilla) White
52. Doug Whitney
53. Unsigned Comment Letter
54. Form letters: 114 form letters (similar to the letters from Evelyn Anderson and Donald Pasanen included in Appendix B1) were received that expressed support for Alternative 3A as the Preferred Alternative. Copies of all of these letters are on file at the MnDOT District 1 Offices in Duluth.

Public Hearing Transcript

1. Angela Campbell
2. Jackie Monahan Junek
3. Greg Junek
4. Jeanne Tome
5. Dan Humay (also included in Appendix B1)
6. Greg Dostert
7. Thomas Rukavina
8. Linda Keith
9. Chuck Renner
10. David Johnson

Appendix B1 –Substantive Comment Letters and Responses

Eagles Nest EA/EAW Responses to Comments

List of Comments

US Environmental Protection Agency (EPA)	2
Minnesota Department of Health (MDH)	13
Minnesota Department of Natural Resources (MNDNR)	17
Minnesota Pollution Control Agency (MPCA)	19
Dan Humay (verbal comment transcribed at the public meeting)	22
Matt Oberhelman	23
Linda Ross Sellner	41
Kurt Soderberg	49
John Welle – Aitken County Engineer	51
Terry Anderson (and 27 co-signers)	52
Jim Barott	54
Chuck and Jacque Glass	56
Steve Piragis	57
Barbara J. Folz	58
Dayna and Eric Mase	59
Steven Lotz	62
Dale Anderson	65
Larry Anderson	66
Evelyn Anderson	67
William and Catherine Kemnitz	68
Donald Pasanen	69

US Environmental Protection Agency (USEPA) Comments (page 1 of 8)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JAN 30 2015

REPLY TO THE ATTENTION OF:

(E-19J)

David Dominguez
Area Engineer
Federal Highway Administration
380 Jackson Street, Suite 500
St. Paul, Minnesota 55101

Michael Kalnbach
Project Manager
Minnesota Department of Transportation
1123 Mesaba Avenue
Mail Stop 010
Duluth, Minnesota 55811

**RE: Environmental Assessment/Environmental Assessment Worksheet
(EA/EAW) for Trunk Highway 1/169 Eagles Nest Lake Area Project, St.
Louis County, Minnesota (State Project Number 6904-46) (December 2014)**

Dear Mr. Dominguez and Mr. Kalnbach:

The U.S. Environmental Protection Agency (EPA) reviewed this EA/EAW prepared by the Federal Highway Administration (FHWA) and Minnesota Department of Transportation (MnDOT) for the Trunk Highway 1/169 (TH 1/169) project. This letter provides EPA's comments pursuant to our authorities under the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), Section 309 of the Clean Air Act, and Section 404 of the Clean Water Act (CWA).

The EA/EAW describes and evaluates a "No-Build" and three build alternatives to address MnDOT's proposed improvements to TH 1/169 for approximately 5.7 miles between Sixmile Lake Road and Bradach Road in rural St. Louis County, Minnesota. The build alternatives are: 1) Alternative 1 (Minimal Offset/Reconstruct Under Traffic), 2) Alternative 2A (Reconstruct with Less Detour: Alternative 3-west/Alternative 2-east) and Alternative 3A (Partial New Alignment Plus Construct Under Traffic). The EA/EAW identifies Alternative 3A as the FHWA/MnDOT preferred alternative.

EPA is a cooperating agency on the EA; and is participating in the informal NEPA/CWA Section 404 merger process for the TH 1/169 project along with MnDOT and the U.S. Army Corps of Engineers (USACE). Under the merger process, EPA previously

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USEPA Comments (page 2 of 8)

concurrent with concurrence point (CP) #1 (Purpose and Need) and CP #2 (Alternatives to carry forward for detailed analysis in the Draft EA) on September 15, 2014. EPA reviewed and commented on the Agency Review Draft of the EA/EAW and concurred on CP #3 (Preferred Alternative) on November 4, 2014. EPA looks forward to further discussions with FHWA, MnDOT, and USACE regarding CP #4 (Mitigation).

The EA/EAW states that many of the details regarding project design, construction and post-construction activities, such as development of detailed additional drilling plans and a water quality monitoring plan, will be decided during or after final design. In any case, it is important that FHWA/MnDOT ensure surface and ground water quality in the project area are protected during construction and operation.

The EA/EAW (page 61, Public Updates) states: "*Because of the level of interest/comment from some project stakeholders regarding the potential for water quality impacts related to rock excavation/ARD, MnDOT will continue to make information available to the public during final design and permitting. For example, as test results become available and as BMP decisions are made as a result of consultation with MnDNR and MPCA staff, the project website will be updated to provide the information to the public.*" EPA recommends MnDOT also consider making available to the public water quality monitoring information prior to, during, and after construction.

Enclosed are additional comments and recommendations regarding acid-producing rock, acid rock drainage, water quality, stormwater, surface water discharge permits, streams/rivers, wetlands, forests, the northern long-eared bat, and mitigation.

Please provide me with one (1) hard copy and three (3) CDs of FHWA's NEPA determination regarding the TH 1/169 project when available. If you have any questions regarding our comments, please contact Virginia Laszewski of my staff at (312) 886-7501 or by email at laszewski.virginia@epa.gov.

Sincerely,



Kenneth A. Westlake
Chief, NEPA Implementation Section
Office of Enforcement and Compliance Assurance

Enclosure: Detailed EA/EAW Comments

cc: Tamara Cameron/Sara Wingert, U.S. Army Corps of Engineers, 180 Fifth Street East, Suite 700, St. Paul, Minnesota 55101
Peter Fasbender/Andrew Horton, U.S. Fish and Wildlife Service, Twin Cities ES Field Office, 4101 American Blvd East, Bloomington, MN 55425-1665
Deb Moynihan, MnDOT, (debra.moynahan@state.mn.us)
Peter Lecte, MnDNR, (peter.lecte@state.mn.us)

Response 1 - As described in the EA, during project final design and permitting MnDOT will continue to work with state water quality regulatory agencies on strategies for addressing water quality protection in the project area during construction and operation.

Response 2 - Water quality monitoring information will be included on the project website Public Updates committed to in the EA/EAW (page 62).

USEPA Comments (page 3 of 8)

Rian Reed, MnDNR, (rian.reed@state.mn.us)
Kevin Molloy, MnPCA, (kevin.molloy@state.mn.us)
Michelle Micke, MnDOT, (michelle.micke@state.mn.us)
Jason Alcott, MnDOT, (jason.alcott@state.mn.us)

USEPA Comments (page 4 of 8)

EPA Comments Regarding the EA/EAW (dated December 2014) for Trunk Highway 1/169 Eagles Nest Lake Area Project, St. Louis County, Minnesota (State Project Number 6904-46)

Preferred Alternative: The EA/EAW identifies Alternative 3A as the preferred alternative. Alternative 3A is a 2-lane rural highway section with a 55-mph design speed. The roadway typical section includes 12-foot driving lanes, 8-foot (6-foot paved and 2-foot gravel) outside shoulders, recoverable ditch slopes (4:1) where possible, and wide clear zones. Right turn/bypass lanes will be included at key intersections. The rural highway section includes adjacent grass drainage ditches that will collect, infiltrate, and convey roadway runoff. Alternative 3A is approximately 5.7 miles in length, of which 3.5 miles are on the existing highway corridor and 2.2 miles are on a new alignment.

Sulfide-rich Pyrite/Acid Producing Rock (APR)/Acid Rock Drainage (ARD)

Appendix C indicates isolated pockets of sulfide-rich pyrite are located in bedrock that is expected to be excavated to build the preferred alternative.

Recommendation: We recommend FHWA/MnDOT utilize adaptive management throughout all future project planning, project construction, and post-construction water quality monitoring to ensure applicable water quality standards are met. As part of the adaptive management process, we recommend drafting a water quality remediation plan as soon as possible, and updating this plan as necessary.

3

Recommendation: Excavated bedrock aggregate should promptly be sorted by sulfur content and managed accordingly. Aggregate containing 0.15% or greater sulfur content should be managed in a lined facility.

4

Recommendation: After additional drill core sampling is completed for the preferred alternative, we recommend those samples be analyzed and modeled before excavation. Based on the revised model outputs, adjustments to the proposed project footprint and/or design (adaptive management) may be needed.

5

Water Quality/Surface Water/Stormwater/ARD

Chapter 5, Section 11i. Surface Water (p. 65) incorrectly states, "No other special designations apply to the water bodies located within the project area."

The waters referenced in the Hwy 169 EA/EAW, include Armstrong Lake, Armstrong River, Clear Lake, Fourmile Lake and Sixmile Lake (p. 65). These waters, unlisted in Minnesota Administrative Rules (Minn. R. Part 7050.0470, are classified as **Class 2B, 3C, 4A, 4B, 5, and 6 waters** (per Minn. R. Part 7050.0430 and described in Part 7050.0140), and shall be protected as outlined in Minn. R. Parts 7050.0220 through 7050.0226.

6

Response 3 - MnDOT has convened (starting in February 2015) a Technical Working Group (TWG) comprising staff from MnDNR, MPCA, MDH, USEPA, MnDOT and FHWA, as well as MnDOT's ARD technical expert Dr. Verburg (Golder Associates). The TWG will provide input on additional data collection and preparation of monitoring and mitigation plans to address ARD risks of the project. MnDOT agrees that it makes sense to revise these plans, as needed in the future, as new information becomes available that warrants changes from the original plan strategies that are developed out of the TWG coordination.

Response 4 - The appropriate practices for handling and placing excavated bedrock with potential sulfur minerals will be developed with the Technical Working Group (see response 3 above). If the TWG thinks it is appropriate, measures such as the one suggested in this comment will be considered.

Response 5 - The approach described in this comment is consistent with the process for characterizing project area rock and then developing plans and practices to avoid/minimize ARD described on pages 61 and 62 of the EA.

Response 6 - The response to Question 11.i in the EAW discusses the 'special' designations specifically referred to in the EAW question; and those designations do not include the water quality standards classifications (which apply to the vast majority of Minnesota waters) referenced in the EPA's comment. However, MnDOT acknowledges that the response to Question V.A.11.a.i. would have been more accurate if the sentence at the end of the first paragraph in the response to the question on page 65 (i.e., "No other special designations apply to the water bodies located within the project area.") was placed, instead, at the end of the second paragraph at the top of page 66. Design and implementation of BMPs to protect water quality will be consistent with NPDES Construction Stormwater permit requirements (as described on page 68 of the EA).

USEPA Comments (page 5 of 8)

All surface waters are protected for multiple beneficial uses. Minn. R. Chapter 7050.0220-0226 defines and specifies water quality standards (WQS) for the protection of the waters in the vicinity of the Highway 1/169 project as follows:

- Class 2B: aquatic life and recreation (includes cool and warm water sport fish). The applicable WQS are defined in Part 7050.0222, Subpart 1 and 4.
- Class 3C: industrial consumption (includes all waters of the state that are or may be used as a source of supply for industrial process or cooling water, or any other industrial or commercial purposes, and for which quality control is or may be necessary to protect the public health, safety, or welfare). Class 3C also specifies the protection of cool and warm water sport fish, indigenous aquatic life, and wetlands. The applicable WQS are defined in Part 7050.0223, Subpart 1 and 4.
- Class 4: agriculture and wildlife. Includes all waters of the state that are or may be used for any agricultural purposes, including stock watering and irrigation, or by waterfowl or other wildlife and for which quality control is or may be necessary to protect terrestrial life and its habitat or the public health, safety, or welfare. Class 4A also includes a sulfate limit of 10 mg/L for the protection of wild rice where it is present. Class 4A waters also include cold water sport fish (trout waters) and 4B waters includes cool and warm water sport fish; both are also protected for drinking water. Applicable WQS are defined in Parts 7050.0220 Subpart 3a. and 4a. and 7050.0224, Subpart 1, 2 and 3.
- Class 5: aesthetic enjoyment and navigation. The applicable WQS are defined in part 7050.0220 Subpart 3a. and part 7050.0225.
- Class 6: other uses and protection of border waters. The applicable WQS are defined in Part 7050.0226.

Recommendation: EPA recommends the highway project team acknowledge the specific designations for these water bodies and ensure the detailed project plan and construction includes protection of the uses specified, as required.

Chapter 5, Section 11ii. Stormwater (p. 67). Detailed information and discussion regarding stormwater runoff before, during, and after construction are not provided in the EA/FAW. Also not provided is discussion of possible changes or environmental effects to the water bodies, nor specific measures that will be taken to protect the surface waters in the area. This information is to be further considered during a later design phase.

Recommendation: EPA recommends MnDOT provide details of any earlier studies, including additional baseline water quality data, verifying that substantial water quality changes will not occur to the receiving water bodies.

Response 6 – see previous page.

Response 7 - Other than the water quality data included in Appendix D of the EA, there were no other 'earlier studies'. Future water quality monitoring and development of BMPs related to potential acid rock drainage (ARD) issues will be based on discussions with the Technical Working Group (see response 3 above). Design and implementation of BMPs to address roadway runoff will be consistent with NPDES Construction Stormwater permit requirements (as described on page 68 of the EA). The NPDES permit does not require sampling and quantitative analysis of water chemistry.

USEPA Comments (page 6 of 8)

Chapter 5, Section 11ii. Stormwater (p. 68) and Appendix D. The document states that baseline water quality monitoring was conducted to establish pre-construction conditions. However, the only data contained in Appendix D includes pH and sulfate data for three sample points, including culvert 1, culvert 2, and Sixmile Lake. Highway construction will occur very close to Fourmile Lake, Armstrong Lake, Clear Lake, and the Armstrong River. See also the description of the Type 5 shallow open water wetland on page 85, which is part of (connected to) Clear Lake. Contrary to wording on page 72, this wetland connection to Clear Lake suggests a potential impact. Additionally, the new roadway will be constructed less than 1000 feet from portions of Fourmile Lake (see also page 72 and Figure 19). Construction will occur in close proximity to Armstrong Lake, Clear Lake and the Armstrong River. All of these water bodies, including wetlands, are subject to the Minnesota rules cited above.

8

Recommendation: EPA recommends collecting more robust water quality data for all potentially affected water bodies prior to the start of construction. We suggest focusing on parameters related to the residue expected from construction and the resulting roadway (such as pH, copper, lead, zinc, phosphorous, sulfate/sulfide, TDS, TSS, and chloride).

Chapter 5, Section 11ii. (p. 70). The EA/EAW identifies that a Surface Water Pollution Protection Plan (SWPPP) is required as part of the construction permit.

9

Recommendation: EPA recommends a long-term SWPPP incorporating best management practices also be prepared and implemented for this roadway upgrade, to ensure highway runoff control measures are established during roadway operations to protect existing water quality of nearby waterways.

Chapter 5, Section 11iv. Table 12 (p. 80). Note (5) states that the potential for sulfide weathering/ARD can be minimized/mitigated. The Verburg-Golder Associates ARD Assessment of the Natural Resources Research Institute/University of Minnesota-Duluth Report (Severson and Heine, 2010, NRRI/Technical Report -2010/13) notes: "State transportation departments across the country have come to [realize] that ARD is an aspect of road construction that needs to be addressed with more vigor." It also notes: "The "Project Screening" phase is essentially what is captured in the NRRI report. The results from this screening phase indicate that the Highway 169 project **cannot be classified as a "low risk" project** (emph. added) which then triggers the chain of activities associated with medium and high-risk projects."

10

Recommendation: EPA recommends that the section on the following page (p. 81) under Section 404(b)(1) of the Clean Water Act – No Significant Degradation be reworded to indicate that all potential sources of surface water quality impacts may not have been identified at this time, and that every effort shall be taken to ensure "No significant impact to aquatic ecosystem diversity, productivity and stability, or aquatic ecosystem-dependent wildlife populations would occur."

6

Response 8 - Since design and implementation of BMPs to address roadway runoff will be consistent with NPDES Construction Stormwater permit requirements (as described on page 68 of the EA), there is no need for water quality monitoring for typical roadway-related pollutants (i.e., copper, lead, zinc, phosphorous, TDS, TSS and chloride noted in the comment). Any future water quality monitoring related to potential ARD issues (i.e., pH and sulfate/sulfide noted in the comment) will be conducted as appropriate, based on discussions with the Technical Working Group [TWG] (see response 3 above, and Section 3.2.7 of the Findings of Fact and Conclusions document). As a member of the TWG, USEPA staff can bring their specific concerns regarding the water bodies listed in this comment to the TWG for discussion/resolution.

Response 9 - The EA/EAW identified that a Storm Water Pollution Prevention Plan (SWPPP) is required for the project. Implementation of the SWPPP includes incorporating appropriate BMPs into the project as needed to address potential water quality/quantity issues. The structural BMPs incorporated into the project, like all MnDOT infrastructure elements, are inspected and maintained over time as needed (e.g., cleaning storm water ponds, etc.), so they remain functional.

Response 10 - The wording of the Golder memorandum quoted in this comment (i.e., Golder's reference to the 'chain of activities' to be 'triggered') is consistent with the process described in the Recommendations described on pages 61-62 [in EAW Item 10.a (Geology)], which is also referenced in the No Significant Degradation section on pages 81-82 of the EA. There is nothing in the quote from the Golder memo referenced in this comment that suggests that there are new potential sources of potential water quality impacts, so the additional wording recommended in the comment (i.e., 'reword to indicate that all potential sources of surface water quality impacts may not have been identified at this time') is not needed. Therefore, the wording of the No Significant Degradation section on pages 81 and 82 of the EA is correct as stated.

USEPA Comments (page 7 of 8)

<u>Stream/Rivers and Wetlands Impacts</u>	11
While the EA/EAW adequately specified a necessary proposed impact to the Armstrong River (to be either an extension of the existing culvert or a full culvert replacement), Table 6 (page 48) incorrectly identifies 0 acres of impacts to Deep Water/Streams for all build alternatives.	
<u>Recommendation:</u> Amend Table 6 to correctly note the number of stream impacts, the names of the streams to be impacted (if an unnamed tributary to a USGS-named stream, refer to it as such), and the linear footage of expected impact for each crossing within each Alternative.	
Page 68 of the EA/EAW states: <i>“The project proposes to utilize vegetated side slopes, grassed roadside ditches, and sediment filtration to treat storm water runoff. The proximity to underlying bedrock, numerous wetlands, and the topographical constraints throughout the corridor restrict the use of wet sedimentation basins or infiltration basins to treat storm water runoff. The Storm Water Pollution Prevention Plan (SWPPP) that will be prepared as part of the NPDES permit will detail the measures to be taken to minimize potentially adverse impacts on receiving water bodies.”</i>	
While the EA/EAW clearly states that site constraints restrict the utilization of wet bottom detention/sedimentation/infiltration basins, the EA/EAW is silent on the potential for secondary impacts to wetlands. Specifically, the EA/EAW fails to discuss how the installation of roadside ditches to drain stormwater can or will affect wetlands, some of which are directly adjacent to the proposed roadway. Ditching through these wetlands to direct stormwater away from the roadway may drain remaining wetland acreage.	12
<u>Recommendation:</u> During the USACE permitting for this project under CWA Section 404, further consider secondary impacts on remaining wetlands such as loss of hydrology to wetlands from installation of roadside ditches; and address how such secondary impacts will be mitigated.	
<u>Air Quality/Construction/Greenhouse Gases/Climate Change</u>	13
The project is expected to comply with applicable air quality standards. However, the EA/EAW does not explain how the project will reduce or minimize greenhouse gas (GHG) emissions during the construction phase.	
<u>Recommendation:</u> We recommend FHWA/MnDOT commit to implementing best management practices to the maximum extent possible during the construction phase. Examples include an anti-idle policy for internal combustion engines and use of clean diesel equipment.	
The EA/EAW does not identify and discuss how the proposed TH 1/169 project may be affected by events associated with climate change. For example, the increased frequency and intensity of precipitation events have been associated with climate change. This might affect how the project is designed, constructed, and operated to handle stormwater.	14
7	

Response 11 - Specific stream impacts are not applicable to Table 6, which summarizes changes in cover type resulting from the project. However it is estimated the total impact to the Armstrong River due to culvert extension or replacement would be less than 0.05 acres. Armstrong River is the only stream/river impacted by the proposed improvements. The stream passes under Highway 1/169 (via a large culvert). This culvert may be able to remain in place and be extended approximately 65 feet on the upstream end to accommodate the proposed roadway changes; or it may need to be replaced with a 130 foot culvert in its current location, depending on the final roadway grades in this area. As stated in the EA/EAW (pp.65-66), this impact would be essentially the same for all three Build alternatives assessed in the EA/EAW.

Response 12 - The potential for secondary hydraulic impacts to wetlands related to ditch depth has been discussed with USACE on previous projects. MnDOT will use this past experience to design the roadside ditches with the objective of avoiding these secondary wetland impacts. Design plans for the project will be reviewed with USACE during the Section 404 permitting process to assess the potential for hydraulic impacts to wetlands. If any ditch modifications would result in lateral effects to wetland hydrology, MnDOT would mitigate for those impacts.

Response 13 - While there is no current regulatory requirement to address greenhouse gas emissions in environmental documents, MnDOT is working with contractors on possible approaches for addressing construction equipment emissions. MnDOT will use feedback from a diesel construction equipment survey of contractors to evaluate ways to reduce construction emissions including incentives, education and outreach, promoting the use of federal grant funding for diesel retrofitting and consideration of a pilot project to reduce idling.

Response 14 - MnDOT has recently updated design standards to better account for increased precipitation amounts and intensity of events.

USEPA Comments (page 8 of 8)

<p>Recommendation: We recommend FHWA/MnDOT consider the anticipated effects of climate change on the project. Identify and implement possible adaptation measures, if applicable. For example, consider the effects that predicted increases in the number and/or intensity of precipitation events associated with climate change may have on sizing bridge spans and/or culvert openings, and stormwater management measures, in order to accommodate such events and ensure project longevity, public health, and safety.</p>	14
<p>Forests/Wildlife Habitat: EA/EAW Table 6 (page 48) shows 75 acres of forest will be cleared for the preferred alternative. Forests provide wildlife habitat and protect surface and groundwater quantity and quality in the watershed, in part by stabilizing the soil and providing a permeable surface for water infiltration. In addition, it is not clear if some trees associated with the potential forest loss are currently used or could be used in the future as maternity roosts for the northern long-eared bat (proposed for federal listing as an endangered species in all 87 Minnesota counties).</p>	15
<p>Recommendation: We recommend MnDOT undertake voluntary upland forest mitigation to compensate for the loss of 75 acres of forested wildlife habitat and reduced water quality protection in the watershed associated with this project.</p>	
<p>Threatened and Endangered Species</p> <p>Northern Long-Eared Bat (<i>Myotis septentrionalis</i>) (NLEB): The EA/EAW (p. 100) states: <i>“The action area is located within approximately three miles of one of the largest known hibernacula for the northern long-eared bat in the State of Minnesota, near the town of Sudan. Due to the close proximity, the proposed project is well within the known distribution distances for the bat’s summer roosting /foraging activities.”</i></p> <p>The U.S. Fish and Wildlife Service (USFWS) letter to MnDOT, dated December 16, 2014, states, in part: <i>“The primary recommendation at this time to avoid and/or minimize impacts to NLEB is to conduct tree clearing outside of the summer roost season. The species is not anticipated to be present within the action area between October 15 and March 30, and clearing of trees during this time would not result in the need for an incidental take permit.”</i></p>	16
<p>Recommendation: EPA recommends continued coordination between MnDOT and the USFWS to identify ways to minimize impacts to NLEB and to prepare for formal consultation, if necessary.</p>	

Response 14 – See previous page.

Response 15 - The majority of land in the project vicinity is in forest vegetation. Therefore, there would be minimal benefit to wildlife and/or water quality from MnDOT voluntarily planting additional trees in the project vicinity. Potential for impacts to the NLEB will be addressed in the coordination process with USFWS (see response to comment 16 below).

Response 16 - MnDOT has committed to continued coordination with USFWS, as described on page 102 of the EA, and in Sections 3.2.3, 3.2.4, and 3.3.1.9 of this Findings of Fact and Conclusions document.

Minnesota Department of Health (MDH) Comments (page 1 of 4)



Protecting, maintaining and improving the health of all Minnesotans

To: Michael Kalnbach, DOT
From: Virginia Yingling, MDH
Re: Trunk Highway 1/169 – Eagles Nest Lake Area Project EA/EAW
Date: January 30, 2015

Dear Mr. Kalnbach:

Minnesota Department of Health (MDH) staff reviewed the Environmental Assessment and Environmental Assessment Worksheet (EA/EAW) for the Trunk Highway 1/169 – Eagles Nest Lake Area Project in St. Louis County and offer the following comments.

The western boundary of the project area is just within the Drinking Water Supply Management Area (DWSMA) for the Tower-Breitung water system (see attached map). The city wells are completed in (and draw their water from) Quaternary deposits which are influenced by local surface water quality (T. Lund, MDH, pers. comm.). As a result, the DWSMA encompasses the watershed of the East Two River, which in part drains from the area near Six Mile Lake (just south of the project area). All properties near the project area not serviced by the Tower-Breitung system use private wells as their drinking water source.

1

MDH's primary concern is the potential for excavation activities to generate acid rock drainage (ARD). If ARD is generated, this then may have the potential to mobilize heavy metals, particularly arsenic, that might adversely affect drinking water quality for nearby residents.

The preferred alternative (south alignment) will re-route approximately 2.2 miles of the roadway, resulting in the excavation of approximately 163,000 cubic yards of bedrock. The uppermost bedrock unit in this area is the Soudan Iron Formation member of the Ely Greenstone (shown on the attached map). According to the Sulfide/Acid Rock Drainage Technical Memorandum in Appendix C of the EAW, this formation in the area of the project contains varying levels of sulfide mineralization, including small "anomalous sulfide zones" in which pyrite content may be as high as 5 percent (determined visually). Sulfide mineralization was observed to approach 15 percent by volume along several major northeast-southwest trending faults that intersect the project area. Geochemical testing confirmed that over 50 percent of the samples from the "anomalous sulfide zones" exceeded the Minnesota Department of Natural Resources (DNR) preliminary threshold of 0.15 percent sulfur.

2

In addition, a study by Larson (NRRI Technical Report TR-2004/23) noted high levels of several heavy metals, including arsenic, in some glacial tills near the project area. This report concludes the majority of these minerals were sourced from bedrock in or near the project area. Under

3

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Response 1 - Section V.A.10.a. of the EA describes the potential for ARD, including the potential concern for heavy metal release/mobilization and also describes the post-NEPA agency coordination process that will be used to characterize and manage the potential water quality risks related to ARD, to avoid adverse surface water and groundwater impacts. This coordination process has been initiated since publication of the EA with the formation of a Technical Working Group (TWG) comprised of staff from MnDNR, MPCA, MDH, USEPA, MnDOT and FHWA, as well as MnDOT's ARD technical expert Dr. Verburg (Golder Associates). Through their participation in the TWG, MDH will be able to provide on-going input regarding potential concerns (such as those identified in their comments on the EA) and to provide input on proposed strategies to address those concerns.

The information provided by MDH regarding the DWSMA has been included in Section 3.2.9 of the Findings document; and potential for impacts to this area will be further considered by the TWG.

Response 2 - The geochemical testing did not confirm that over 50 percent of the samples from the 'anomalous sulfide zones' exceeded 0.15 percent sulfur. Only 17 out of the 62 samples (i.e., 27 percent) from the anomalous sulfide zones contained sulfur \geq 0.15 percent.

Response 3 - As noted in the comment, the existing water quality data does not suggest that past road construction in this area has resulted in arsenic mobilization. The TWG coordination [see response #1 above] in the development of plans and best management practices for this project will avoid/minimize the potential for ARD from the project, which would also avoid/minimize the potential for arsenic mobilization/transport. The March 2015 technical memorandum prepared by Golder Associates (see Appendix E2 of the Findings document) includes assessment of the potential for release of metals (e.g., arsenic) from till in the project area as a result of construction, and concludes that release of metals is not likely. The TWG will provide an opportunity for the technical experts to share their understanding of this and other issues related to geochemistry and potential for water quality impacts.

MDH Comments (page 2 of 4)

Page 2 – MDH Comments
January 30, 2015

more acidic conditions, it is possible these metals could be mobilized.

As road work has occurred in this area in the past, MDH located available arsenic sampling results from newer wells near the project area (see map) to determine if any existing impacts could be identified. Most wells sampled in the area did not have detectable arsenic, except the four listed below and indicated with blue “flags” on the map:

UN 777377 – 2.9 ug/L (micrograms per liter)
UN 798910 – 0.69 ug/L
UN 786199 – 98.9 ug/L
UN 786198 – 252 ug/L

3

The latter two wells are located in the new Lake Vermillion State Park and appear to be completed in a different formation than the Soudan Iron Formation. The highest arsenic levels detected near the project area (2.9 ug/L) are in well 777377 that may be located near a fault zone (although its exact location is not known). Overall, the existing water quality data suggest that previous road construction has not resulted in mobilization of arsenic in this area. However, there are no water quality data available for wells near the western end of the project area and no information regarding groundwater flow direction.

Figures 12 and 15 of the EA indicate that some road cuts will be located near the faults near the west and east end of the project area (respectively), but page 57 of the EA notes that the identified fault zones are “mostly” in planned fill areas. If any excavation does occur within the fault zones, this could result in exposure of rock with greater ARD potential. Moreover, the fault zones may provide conduits for movement of ARD and any mobilized metals arising from the fill areas.

4

The surface water flow directions shown in Figure 19 of the EAW suggest that most, if not all, of the surface drainage from the project area will remain outside of the East Two Mile River watershed. However, it is unclear whether groundwater might provide a pathway for potential ARD and/or potentially mobilized metals to enter the watershed. Baseline surface water quality monitoring was conducted on Six Mile Lake (and elsewhere) and additional monitoring is planned by DOT during and after construction to evaluate any project impacts. This should help to verify that source waters within the Tower-Breitung DWSMA are not negatively impacted.

5

The available data suggest that previous road construction activities in this area have not resulted in significant arsenic mobilization to groundwater. However, the limited nature of the available groundwater data, the absence of groundwater flow information, and the abundance of nearby drinking water wells create a level of uncertainty that warrants additional caution,

3

Response 3 – see previous page.

Response 4 - The modifier ‘mostly’ was used on page 57 of the EA/EAW since, as noted in this comment, some cuts may be located near fault areas. Concerns about excavation in fault zones will be addressed in greater detail through MDH’s participation in the work of the TWG to characterize and manage the potential risks related to ARD, to avoid potential adverse surface water and groundwater impacts [see response #1 above].

Response 5 - The TWG coordination [see response #1 above] in the development of plans and practices for this project will avoid/minimize the potential for ARD from the project, which would also prevent the potential mobilization/transport of metals.

MDH Comments (page 3 of 4)

Page 3 – MDH Comments
January 30, 2015

considering the potential health consequences associated with chronic exposure to heavy metals.

3

The Minnesota Department of Transportation (DOT) has committed to consulting with the DNR, Minnesota Pollution Control Agency (MPCA), MDH, and other interested agencies while working with their consultant to develop a work plan for a more detailed materials characterization and a materials management/mitigation plan based on the characterization results. This should provide greater confidence both in the analysis of sulfide content of the affected bedrock and the evaluation of ARD potential.

6

In addition, MDH recommends DOT consider the following:

1. Installation of monitoring wells near the fault zones to provide baseline and post-construction groundwater chemistry and heavy metal concentration data.
2. Offer collection of baseline metals samples from nearby wells for interested well owners.
3. If post-construction testing of monitoring wells indicates ARD or increased metals in the groundwater, provide follow-up testing of nearby private wells.

7

MDH will be happy to assist DOT, if needed, in selecting the appropriate analytes for water quality testing.

Thank you for the opportunity to comment on the EA/EAW. If you have any questions, please contact me at 651-201-4930 or Virginia.yingling@state.mn.us

Sincerely,

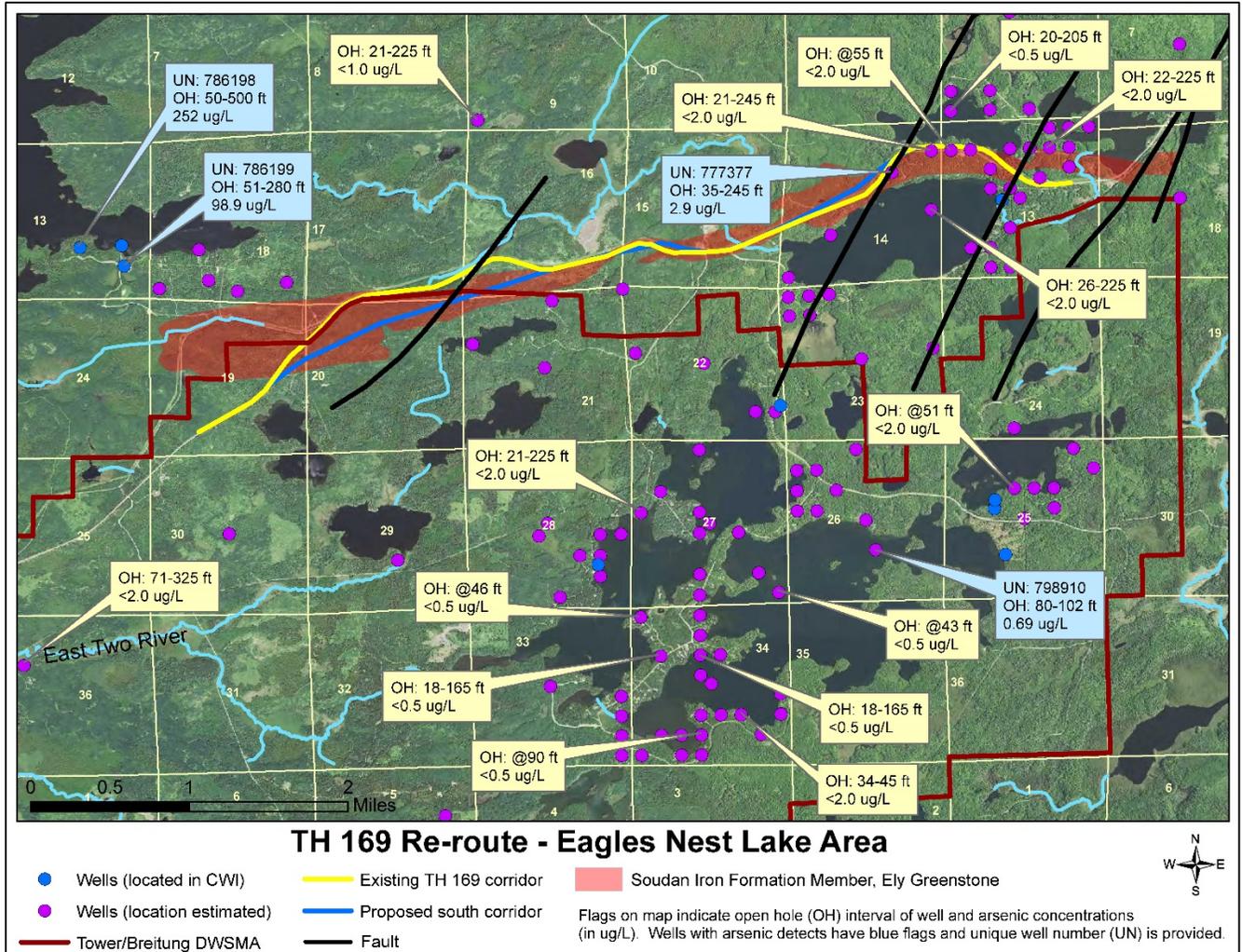


Ginny Yingling
Hydrogeologist
Site Assessment and Consultation Unit
Environmental Health Division
Minnesota Department of Health

Response 6 - MnDOT appreciates MDH staff commitment to participate in the TWG [see response #1 above].

Response 7 - A plan for appropriate water quality monitoring before, during and after construction will be developed with input from the TWG members, including MDH.

MDH Comments (page 4 of 4)



Minnesota Department of Natural Resources (MNDNR) Comments (page 1 of 2)

Minnesota Department of Natural Resources
Northeast Region • 1201 East Highway 2 • Grand Rapids MN • 55744



January 29, 2015

Michael Kalnbach, P.E.
Minnesota Department of Transportation
District 1- Duluth
1123 Mesabi Avenue
Duluth, MN 55811

RE: Combined Federal Environmental Assessment (EA) and State Environmental Assessment Worksheet (EAW), Highway 1/169 Improvement Project (Eagles Nest Lake Area), S.P. No. 6904-46

Dear Mr. Kalnbach,

The Minnesota Department of Natural Resources has reviewed the Combined Federal Environmental Assessment (EA) and State Environmental Assessment Worksheet (EAW) for The Highway 1/169 Improvement Project. We have the following comments for your consideration.

Bedrock Material Management

The Minnesota Department of Natural Resources, Minnesota Pollution Control Agency and Minnesota Department of Health have a commitment from MnDOT to work cooperatively on a multi-phase science-based plan to address material management concerns for MnDOT's HWY 1/169 Eagles Nest Lake Area Project. The cooperative work will include development of a material characterization work plan for bedrock that will be blasted and/or excavated for the road project. It will also include development of a mitigation plan that will be based upon the results from the material characterization work plan. We appreciate this opportunity to work together to ensure that the path forward is one which considers all of our interests and goals.

1

General Mineral Resource Comments

State-owned mineral rights in the project area have seen multiple episodes of metallic mineral exploration, with some parcels being held under active state metallic mineral lease as recently as December of 2014 (Section 19 of Township 62 North, Range 14 West). The shallow bedrock geologic features of the project area remain incompletely explored, and based on the presence of geologic, geochemical and geophysical anomalies, it will not come as a surprise to see additional future interest in leasing state-owned mineral rights in this area.

2

Modern drill tests for intercepts of base metal or precious metal mineralization are not known to have occurred within the project footprint, though such occurrences are known to exist in the surrounding Five Mile Lake, Six Mile Lake, Eagles Nest #1 and #4 Lakes, Clear Lake, and Gafvert Lake locales. The primary mineral deposit models that have been used to guide previous explorations are the Algoma Iron Formation model (Soudan Mine, Ely Mines, and other local iron prospects); the volcanic-hosted massive sulfide (VhMS) model (Five Mile Lake, Six Mile Lake, Skeleton Lake and other VhMS prospects); and Lode Gold model (Murray Shear, Mud Creek, Foss Lake, Raspberry, Garden Lake, and other gold prospects). The DNR can further assist with mineral resource

Response 1 - The cooperative process has been initiated since publication of the EA with the formation of a Technical Working Group (TWG) comprised of staff from MnDNR, MPCA, MDH, USEPA, MnDOT and FHWA, as well as MnDOT's ARD technical expert Dr. Verburg (Golder Associates). MnDOT appreciates MnDNR staff commitment to participate in the TWG.

Response 2 - In addition to the information provided in this comment, MnDNR staff have been working with MnDOT staff to compile available data regarding mineral resources within the project area and work through the issues identified in this comment. This collaborative process will continue through the right-of-way acquisition process.

MNDNR Comments (page 2 of 2)

occurrence information when public waters are used as descriptive locales since there may be inconsistencies between local water body and State Public Water Inventory names. Records of 10 historical (1902-1903) iron exploration drill records and 16 historical iron exploration test pits have been found in the mineral exploration archives housed at MnDNR-Hibbing, covering the northeast quarter of Section 19, the northwest quarter of Section 14 and the northeast quarter of Section 13 in the project area.

While the metallic mineral resource potential of State-owned lands in the project area is rated High (meaning that known mineral occurrences are present locally in the Ely Greenstone Belt), there is insufficient mineral occurrence information to suggest that one or another of the project alignments achieves greater risk reduction for the mineral estate. The overall project area remains prospective for iron formation, for copper and zinc in massive sulfide, and for gold deposits due to the presence of multiple types of geologic, geochemical and geophysical anomalies in the immediate vicinity. Future access to underlying School Trust and Tax Forfeit mineral rights for exploration, evaluation and mining purposes should be ensured in right-of-way agreements so that in the unlikely, but possible event of mineral deposit discovery, the benefits of such discovery are able to accrue to school trust and tax forfeit beneficiaries.

Thanks for the opportunity to comment, we look forward to working collaboratively on this project. Please feel free to call or email me with any questions you have.

Sincerely,



Rian Reed
Northeast Regional Environmental Assessment Ecologist
MNDNR, 1201 East Hwy 2
Grand Rapids, MN 55744
218-999-7826
rian.reed@state.mn.us

2

Response 2 – see previous page

Minnesota Pollution Control Agency (MPCA) Comments (page 1 of 2)



Minnesota Pollution Control Agency
520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300
800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us | Equal Opportunity Employer

January 30, 2015

Mr. Michael Kainbach, P.E.
Minnesota Department of Transportation
District 1 – Duluth
1123 Mesabi Avenue
Mail Stop 010
Duluth, MN 55811

RE: Truck Highway 169 / Eagles Nest Lake Area Project Environmental Assessment/Environmental Assessment Worksheet

Dear Mr. Kainbach:

Thank you for the opportunity to review and comment on the Environmental Assessment (EA)/Environmental Assessment Worksheet (EAW) for the Truck Highway 169 / Eagles Nest Lake Area Project (Project) located in St. Louis County, Minnesota. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility and other interests, the MPCA staff has the following comments for your consideration.

1. Regarding Item 11 of the EA/EAW, as indicated in the document, Armstrong Lake (69-0278) is impaired for mercury in fish tissue and was placed on the Minnesota's Impaired Waters List in 2002. Other impaired waters adjacent to or downstream of the project include:
 - West Robinson Lake (69-0217), listed in 2012 for mercury in fish tissue, and
 - Lake Vermilion East (69-0378-01), listed in 1998 for mercury in fish tissue.
2. Regarding Item 11, B.ii, Highway 1/169 Roadway Design, this approach does not comply with the National Pollutant Discharge Elimination System (NPDES) Permit. Minnesota Department of Transportation (MnDOT) must follow the sequence identified in the permit. Where one or more acres of new impervious surface is created, a water quality volume of one inch of runoff from the new impervious surfaces must be treated onsite. Runoff volume reduction is required. Infiltration is required in hydrologic soil group A, B and C soils.

If volume reduction cannot be achieved within the existing (or proposed) Right of Way (ROW), reasonable attempts to obtain additional ROW for permanent stormwater treatment must be made. "Reasonable attempt" means land acquisition efforts up to condemnation of the subject property, and may include internal discussions, contacting landowners, holding stakeholder meetings, public meetings to discuss the project with adjacent landowners, etc. Documentation of these attempts must be in the Stormwater Pollution Prevention Plan (SWPPP) per Part III.A.5.m. – in the section addressing infeasibility. If additional property is not available, or the available property offers no better volume reduction potential, this must be documented in the SWPPP. After the reasonable attempt evaluation has been performed and documented and MnDOT staff has determined that volume reduction cannot be accomplished, other options allowed by the permit to treat the Water Quality (WQ) volume (or remainder of the WQ volume) including Filtration, Wet Sedimentation Basins and Regional Ponds within the ROW may be utilized.

Response 1 - The two additional referenced resources have been added to Section 3.2.10 of the Findings and Fact and Conclusions.

Response 2 - It is MnDOT's intent to infiltrate according to NPDES permit requirements. Section 3.2.11 of this Findings of Fact and Conclusions document describes updated information re: infiltration for the project. As noted in the EA/EAW, a more detailed storm water analysis and treatment plan will be developed during final design, to fully comply with NPDES permit requirements. MnDOT appreciates the information on infiltration considerations provided in the MPCA's comment, including the description of options for meeting the infiltration requirement in the NPDES permit.

MPCA Comments (page 2 of 2)

Mr. Michael Kainbach, P.E.
Page 2
January 30, 2015

For those projects where infiltration is prohibited (see NPDES/SDS permit Part III.D.1.j.), other methods of volume reduction must be considered and the water quality volume must be treated by a wet sedimentation basin, filtration system, regional ponding or equivalent methods. In Hydrologic Soils Group D soils, or where shallow bedrock precludes the installation of any of the more effective and preferred permanent stormwater management practices, impervious ditch check systems can be constructed with suitable filtration material (e.g. sand) and underdrains lining the ditch bottoms.

2

Where ROW constraints exist, efforts must be made to maximize the water quality volume that can be treated. Treatment can be provided through other methods (or combination of methods) such as grassed swales, filtration systems, smaller ponds, or grit chambers. Utilizing these less effective permanent stormwater treatment methods can only be pursued after the above sequence has been followed and documented.

3. The Minnesota Department of Natural Resources, MPCA and Minnesota Department of Health have a commitment from MnDOT to work cooperatively on a multi-phase science-based plan to address material management concerns for MnDOT's HWY 1/169 Eagles Nest Lake Area Project. The cooperative work will include development of a material characterization work plan for bedrock that will be blasted and/or excavated for the road project. It will also include development of a mitigation plan that will be based upon the results from the material characterization work plan. We appreciate this opportunity to work together to ensure that the path forward is one which considers all of our interests and goals.

3

We appreciate the opportunity to review this project. Please provide your specific responses to our comments and the notice of decision on the need for an Environmental Impact Statement. Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this EA/EAW please contact me at 651-757-2482.

Sincerely,



Kevin Kain
Project Manager
Environment & Energy Section
Resource Management & Assistance Division

KK:ld

cc: Dan Card, MPCA, St. Paul
Tom Estabrooks, MPCA Regional Manager
Richard Clark, MPCA, St. Paul

Response 2 – see previous page.

Response 3 - The cooperative process has been initiated since publication of the EA with the formation of a Technical Working Group (TWG) comprised of staff from MnDNR, MPCA, MDH, USEPA, MnDOT and FHWA, as well as MnDOT's ARD technical expert Dr. Verburg (Golder Associates). MnDOT appreciates MPCA staff commitment to participate in the TWG.

Dan Humay Comment (verbally transcribed at the public meeting)

08:02PM 22 MR. DAN HUMAY: My name is Dan Humay,
08:02PM 23 H-U-M-A-Y. I live at 1220 Walsh Road in Eagles
24 Nest Township.
08:02PM 25 And I'm very appreciative of the
08:02PM 1 progress that is being made here to provide us
08:02PM 2 with a safe travel route between Highway 53 and
3 Ely.
08:02PM 4 My concern is this: My concern is
08:02PM 5 with mitigation and that the proper processes are
08:03PM 6 implemented and followed as-needed.
08:03PM 7 Mention was made of the DNR doing some
08:03PM 8 mitigation work in the park when they uncovered
08:03PM 9 sulfide rock.
08:03PM 10 They have done an abysmal shameful
08:03PM 11 job. They have piled the rock, it's now exposed
08:03PM 12 and not covered as it should be. And they are a
08:03PM 13 state agency that is charged with environmental
08:03PM 14 responsibility.
08:03PM 15 I hope that the overseers of this
08:03PM 16 project will follow the regulations and do what's
08:03PM 17 necessary to make sure that mitigation is done
08:03PM 18 properly.
08:03PM 19 Thank you very much.

Response 1 – Section V.A.10.a. of the EA describes the potential for ARD and also describes the post-NEPA agency coordination process that will be used to characterize and manage the potential water quality risks related to ARD, to avoid adverse surface water and groundwater impacts. This coordination process has been initiated since publication of the EA with the formation of a Technical Working Group (TWG) comprised of staff from MnDNR, MPCA, MDH, USEPA, MnDOT and FHWA, as well as MnDOT's ARD technical expert Dr. Verburg (Golder Associates). MnDOT has committed to continue to work with the TWG and to implement protocols during project design and construction to properly identify and manage sulfide materials encountered during construction.

Matt Oberhelman Comments (page 1 of 9)

REVISED COMMENTS TO HIGHWAY 1/169 EAGLES NEST LAKE AREA PROJECT
EA/EAW

Date: January 27, 2015

From: Matt Oberhelman, Geologist
Sixmile Lake Property Owner

To: Michael Kalnbach, Michael.Kalnbach@state.mn.us;

Cc: Kenneth Westlake, westlake.kenneth@epa.gov;
Virginia Laszewski, laszewski.virginia@epa.gov;
Phil Forst, phil.forst@dot.gov;
David Dominguez, david.dominguez@dot.gov;
Leslie Day, Leslie.e.dav@usace.army.mil;
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James Kelly, james.kelly@state.mn.us;
Randall Doneen, Randall.Doneen@state.mn.us;
Tom Landwehr, Tom.Landwehr@state.mn.us;
Jess Richards, Jess.Richards@state.mn.us;
Ann Foss, Ann.Foss@state.mn.us .j

Please find below my comments to the Highway 169 Eagles Nest Lake Area Project EA/EAW.

EXECUTIVE SUMMARY

As the responsible government unit (RGU), MnDOT has an obligation to the citizens of Minnesota to ensure that the scientific information presented in this environmental evaluation is accurate and complies with established protocol for evaluating potential threats to public health posed by acid rock drainage (ARD) and metals leaching (ML) from sulfide mineralization known to exist along the proposed realignment. 0

As this letter will show, the Highway 169 Eagles Nest Project Environmental Assessment (EA/EAW) is deficient in a number of respects that severely undermine the scientific foundation of MnDOT's evaluation and the integrity of the project. Most critically:

1. The EA/EAW fails to disclose a critical expert's report which concluded that the project "cannot be classified as 'low risk'." 1
2. The EA/EAW is grossly misleading in implying that the expert's report supports NRRRI's conclusions, including that no further drilling is necessary in the initial study area that pertains to the west 1/2 of the south route. 2a
3. The EA/EAW fails to address the consequences of fatal errors made during sample preparation for sulfide analysis. 3a

Response 0 - As described in the Recommendations sub-section (pages 61-62) of section V.A.10.a in the EA/EAW document and in the responses to the specific points raised in this comment letter below, MnDOT has been and will continue to be working with other state agencies (DNR, PCA, and MDH) and others (e.g., USEPA and expert consultant Golder Associates) with knowledge of issues related to acid rock drainage and water quality to accurately assess the potential risks and to develop best management practices and protocols to control those risks.

Response 1 - The 2011 Golder memo was not attached to the EA, but it was included in the List of Studies in Appendix B of the August 28, 2014 "Sulfide/Acid Rock Drainage Technical Memorandum" that was included in the EA. So, MnDOT did not 'fail to disclose' the Golder memorandum, as was suggested by the commenter.

The Golder memorandum statement that the project "cannot be classified as 'low risk' ", as well as the

other statements that the commenter has excerpted from the report and cited in the comment, was taken out of context by the commenter. The March 1, 2011 Golder memorandum was prepared following Dr. Verburg's review of the first NRRI report that summarized their initial visual estimates of sulfur content in rock outcrops along the west realignment corridor. Based on the review of information available at that time, Dr. Verburg concluded that the project could not be classified as 'low risk'. However, this was not meant to imply that the project could never be classified as 'low risk' as additional information might become available that would require a re-classification. Since that time, MnDOT followed Dr. Verburg's recommendation for 'next steps' by performing additional rock sampling and laboratory testing to further assess the potential for ARD. Based on the results of this additional work, Dr. Verburg has concluded that the Highway 169 project can be classified as a low risk, as discussed in the "Updated Evaluation of Potential Impacts Related to Acid Drainage – Eagles Nest Lake Environmental Assessment" (March 9, 2015) and "Risk Evaluation of the Highway 169 Project" (May 12, 2015) technical memoranda by Golder Associates, included in Appendix E2 of the Findings document.

Response 2a - For the record: 1) The "EA/EAW (page 8)" quote referenced in the first paragraph of this comment (on page 3 of the comment letter) is actually a quote from page 8 of the "Sulfide/Acid Rock Drainage Technical Memorandum" included in Appendix C of the EA/EAW; and 2) the report in Appendix C was prepared by SEH consultants, not by NRRI as stated in the second paragraph of this comment (page 3 of the comment letter).

The wording in the memorandum in Appendix C and in the EA/EAW was not aimed at 'giving the impression that the DNR, PCA, and Dr. Verburg are in full agreement with NRRI's conclusion' that the area bedrock has generally low to no sulfur, and the commenter does not give specific examples of what sections of the documents gave him that impression. The description of the NRRI findings is in a section of the memorandum and EA/EAW that is separate from the description of the 'Consultation' section that describes the review and coordination with Dr. Verburg and the DNR and PCA. The memorandum and EA/EAW state that "The Recommendations that follow resulted from the consultation with MPCA and MnDNR staff." The Recommendations that follow outline the post-NEPA agency coordination process that will be used to characterize and manage the potential water quality risks related to ARD. This coordination process has been initiated since publication of the EA with the formation of a Technical Working Group (TWG) comprised of staff from MnDNR, MPCA, MDH, USEPA, MnDOT and FHWA, as well as MnDOT's ARD technical expert Dr. Verburg.

The wording of Section V.A.10.a. has been revised and included in its entirety in the Findings document (Appendix E3) to clarify the input from the DNR, MPCA and Dr. Verburg in the process thus far, in response to this comment.

Response 3a - Review of this issue with NRRI and with Dr. Verburg indicated that the sample preparation methodology used by NRRI was consistent with standard practices. This includes removal of surface weathered 'rind' material in order to get to the fresh, unweathered rock below. The 2012 NRRI report (pages 9, 16 and 17) describes the details of the sample preparation process and identifies the 'isolated' samples (12 out of 62) that may have had some sulfide-rich material removed with the weathered rind, so this can be considered when using the data from the laboratory analyses. Therefore, the lower-than-expected sulfur results for the isolated samples cannot be considered to be 'fatal errors',

as characterized by the commenter, and the results of this sampling are adequate to characterize the overall potential risk for ARD and to define the process for managing that risk (described in Section V.A.10.a of the EA/EAW), for the purpose of making a NEPA determination on the need for preparing an EIS.

Dr. Verburg's March 2015 memorandum (page 3, see Appendix E2 of the Findings) discusses why he finds that the analytical results indicate that the overall sulfur content along the proposed alignment is low, and why sample discrepancies do not affect the overall 'interpretive value of the sulfur data collected to date', since the 'overall spatial patterns and distribution in the project area are well understood' [i.e., that the 'anomalous sulfide zones' are relatively small areas scattered within a large mass of low to 'below laboratory detection limits' sulfur content rock].

As part of the on-going agency coordination process, the members of the TWG [see Response 2a above] will have the opportunity to review the sampling data collected to date {including NRRI's reports and recommendations referenced in Comment 3a} along with other pertinent project information [e.g., overall geology, location of faults, locations of cut vs. fill for the project, etc.], to determine if and where additional data collection is warranted to inform development of best management practices.

Matt Oberhelman Comments (page 2 of 9)

4. MnDOT's undisclosed drilling plan and NRRI's drilling recommendations are inappropriate for this specific geologic environment.	4a / 4b
5. The EA/EAW fails to ensure that appropriate rock characterization, chemical analysis and hence proper mitigation will be conducted.	5
6. The EA/EAW contains several additional technical deficiencies.	6a - 6f
The EA/EAW's conclusion that the north route has higher sulfide content than the south route is incorrect and not defensible. The north route exhibits limited outcrop exposures, it appears construction would mostly require fill with little disturbance of bedrock. The statement "The main concern regarding the north route is that the rocks beneath the wetlands along this corridor appear to contain a much higher sulfide content based on geologic trends of geologic units" is speculative. Appropriate bedrock characterization by means of core drilling with geochemical analyses should be required on both routes.	7
To remedy these material failures of the EA/EAW, the following steps need to be taken and committed to in writing, with the relevant parties held accountable:	
<ul style="list-style-type: none"> MnDOT should be required to perform a formal Environmental Impact Study of the sulfide issue which the realignment may cause. 	8
<ul style="list-style-type: none"> MnDOT should be required to perform sampling/testing prior to beginning construction. MnDOT must define and ultimately execute a mitigation plan to be included in the EIS. The DNR and MPCA must have an "oversight" role and be required to conduct proper testing and mitigation if sulfides are encountered, following the avoid/minimize/mitigate sequence. 	9
<ul style="list-style-type: none"> MnDOT must engage a qualified consultant with ARD expertise (such as Golder Associates) to design and implement proper site testing and mitigation plans if sulfides are encountered, following the avoid/minimize/mitigate sequence. Field verification must also be conducted by the consultant to ensure BMP are correctly being followed. The difference in rock excavation volumes among alternatives should be considered a key factor in selecting a preferred alternative route and reconstruction within the existing corridor should be re-assessed. 	8
1. THE EA/EAW FAILS TO DISCLOSE A CRITICAL EXPERT'S REPORT WHICH CONCLUDES THAT THE "HIGHWAY 169 PROJECT CANNOT BE CLASSIFIED AS 'LOW RISK'."	
In 2011, MnDOT retained Dr. Rens Verburg, Principal Geologist with Golder Associates to analyze the NRRI ARD related field methods and interpretations, to review the project as a whole and make technical recommendations. Dr. Verburg is a nationally renowned expert specialized in ARD evaluation and mitigation practices. The purpose of engaging Dr. Verburg is to ensure that Best Methods Practices (BMP) are adhered to throughout the project when managing ARD. The EA/EAW refers to Dr. Verburg and his report, but does not include it as an appendix nor clearly state and address its clear assessment of the project's risks.	1
On March 1, 2011, Dr. Verburg issued a Technical Memorandum (attached Exhibit 1) that reviewed the investigation led by the NRRI and the University of Minnesota Duluth (UMD), provided an opinion as to	
	2

Response 4a - The draft drilling plan was not included in the EA/EAW because it was a preliminary plan [based on PA and TN DOT protocols], developed to estimate potential costs [to include in the project cost estimate for mitigation] of post-NEPA drilling investigations that may be recommended as an outcome of coordination with the TWG [see Response 2a above]. The discussions with the TWG will determine where and what sampling will be needed to further characterize the rock to be excavated in the project area.

Response 4b - NRRI's recommendations for additional drilling (or not doing additional drilling) will be one of the items taken into consideration by the TWG, as it determines if and where additional data collection is warranted to inform development of best management practices. The TWG may or may not accept their recommendations.

Response 5 - As described in the Recommendations sub-section (pages 61-62) of section V.A.10.a in the EA/EAW document, MnDOT has been and will continue to be working with other state agencies (DNR, PCA, and MDH) and others (e.g., USEPA and expert consultant Golder Associates) with knowledge of issues related to acid rock drainage and water quality in a process that will determine if/where additional investigations are needed to adequately characterize the rock in the project area, prior to developing mitigation practices to avoid/minimize ARD. This process has started, since completion of the EA/EAW, with the formation of the TWG, described in Response 2a above.

Response 6a - Section V.A.11. of the EA/EAW included information on water resources and drainage patterns in the project area. This information will be used by MnDOT and other agency staff in the Technical Working Group as ARD Best Management Practices are considered for the project.

Response 6b - The Tennessee guidelines recommend monitoring of several water quality parameters in addition to pH and sulfate. However, according to MnDOT's ARD expert consultant Dr. Verburg (Golder Associates), monitoring for pH and sulfate alone typically is sufficient to identify the presence of acid potential rock, as these are the two most diagnostic parameters. The other parameters provide supporting evidence but are not essential to the determination of acid rock drainage.

The process (described in Section V.A.10.a.-Recommendations of the EA/EAW – see quoted text below) for working through the issues related to ARD with the Technical Working Group (TWG) [see Response 2a above] includes consideration of water monitoring.

EAW text: "Identify if pre- or post-construction monitoring is needed: Discussions with MPCA and MnDNR staff will also include consideration of whether monitoring of excavated bedrock materials and/or surface water chemistry in water bodies in the project areas are needed to characterize the materials encountered during construction and/or whether post-construction water chemistry changes occur. If discussions with agency staff results in a recommendation for monitoring, MnDOT would be responsible for performing and reporting monitoring results."

Therefore, the TWG will consider water monitoring as part of its review of the project, going forward.

Response 6c - The statement in the EA/EAW referenced in this comment is making a comparison to mining activities, and is accurate, when read in its entirety: "Compared to the high surface areas produced by mining activities (which involve extensive crushing rock into more fine-grained material with high surface area), the bedrock (and rock slopes) exposed by the roadway construction process would have relatively low surface areas, since the rock fill produced by blasting will primarily be large-diameter (+3-inch to +6-inch size) material."

Response 6d - MnDOT checked with Dr. Dean Peterson regarding the PRC Gafvert Lake Capstone Project field mapping exercise referenced in this comment. Dr. Peterson indicated that the PRC students' field work was relatively limited (in time and in area/number of outcrops actually surveyed), and that the 'regionally pervasive sulfide mineralization' and 'regionally pervasive sulfide burn' characterization in Mr. Oberhelman's comment is not accurate. The student's work was focused in the outcrops on/near Mud Creek Road and does not reflect the overall rock characteristics in this 'region'. Dr. Peterson's data

files for 1,056 rock outcrops associated with the Soudan Iron Formation in the Vermillion District indicated that 13 outcrops (0.12%) were 'weakly' sulfide-bearing and the remainder (1,043 outcrops) did not contain sulfides. This data supports the 'low sulfur' general characterization of the iron formation rock outcrops described by NRRRI in their field work, and summarized in the EA/EAW.

Response 6e - Section V.A.10.a. of the EA describes the potential for ARD, including the potential concern for heavy metal (including arsenic) release/mobilization. This section also describes the post-NEPA agency coordination process that will be used to characterize and manage the potential water quality risks related to ARD, including the potential for release of heavy metals, to avoid adverse surface water and groundwater impacts. This coordination process has been initiated since publication of the EA with the formation of a Technical Working Group (TWG) comprised of staff from MnDNR, MPCA, MDH, USEPA, MnDOT and FHWA, as well as MnDOT's ARD technical expert Dr. Verburg (Golder Associates). Through their participation in the TWG, the MDH [the state agency that monitors/regulates issues such as heavy metal impacts to surface and groundwater] will be able to provide on-going input regarding potential project water quality concerns and to provide input on strategies to address those concerns.

Response 6f - The wording of this comment does not clearly state what the relevance of the 'geology and mineral potential of the area' is. The geologists who conducted the field work have extensive knowledge of the geologic formations in the project vicinity and the minerals contained in them, and they used available literature as needed to supplement that knowledge, as evidenced by the references included in the NRRRI reports.

Response 7 - The sulfide content of rocks along the north corridor was not the reason that the north corridor was eliminated in early project screening. The primary reason for eliminating the north corridor is summarized in the EA/EAW Section III. Alternatives at the top of page 14: "Based on the analysis and input received, the North Corridor alternative was dismissed from further consideration due to substantially greater wetland impacts (approximately 32 acres compared to between approximately 6.6 and 17.3 acres with the other corridors), most of these impacts being to wetlands considered as having high wetland functions and values for water quality and wildlife habitat... Therefore, it is very unlikely that the North Corridor would meet the least environmentally damaging practicable alternative (LEDPA) criteria for Section 404 wetland permitting."

This section of the EA/EAW (and page 6 of the 'Alternatives Development and Screening' technical memorandum in Appendix A of the EA/EAW) does not contain the statement quoted in this comment. It is unclear what the source for the statement is.

Response 8 - The sulfide/ARD issue is present with all of the project alternatives – i.e., with or without a road realignment. The EA/EAW describes the process that will be used to manage the potential ARD risks – and that process will provide the additional details regarding the items listed in this comment. The same process would be used for any of the alternatives, and the outcome would be the same: i.e., Best Management Practices would be incorporated into the project to avoid/minimize/mitigate ARD.

Since the ARD risk can be managed (as described in Section V.A.10.a of the EA/EAW, and summarized in the 'Conclusions' sub-section), it was not 'the deciding factor' in selection of the Preferred Alternative. The EA/EAW assesses all of the social, economic and environmental impacts, as well as the transportation benefits, of three project alternatives that represent a range of options, similar to the analysis of alternatives that would be done for an Environmental Impact Study/Statement (EIS).

Based on comments received on the EA/EAW, MnDOT does not see that any additional information that would change the Preferred Alternative selection or the process to characterize rock and develop mitigation would result from preparation of an EIS as suggested in the comment. It should also be noted that none of the regulatory agencies that provided comments on the EA/EAW suggested that an EIS should be prepared.

Response 9 - All of these issues are being addressed through the work of the Technical Work Group (TWG) recently initiated to begin the process described in the EA/EAW Section V.A.10.a – Recommendations (pages 61-62 of the EA/EAW). The TWG includes staff recommended in this comment – i.e., MnDNR, MPCA, and ARD technical expert Dr. Verburg from Golder Associates [who was described in Mr. Oberhelman's Comment #1 as a 'nationally renowned expert specialized in ARD evaluation and mitigation practices'] – as well as staff from MDH, USEPA, MnDOT and FHWA.

Matt Oberhelman Comments (page 3 of 9)

the potential for ARD generation and made recommendations for further work. This report is glaringly absent from the EA/EAW.

In his Memorandum, Dr. Verburg concluded that **the NRRI's mapping program and visual identification of sulfide minerals represent "only the very beginning of a defensible ARD assessment."** They essentially constitute a "Project Screening phase" the results of which indicate that **"the Highway 169 project cannot be classified as a 'low risk' project, which then triggers the chain of activities associated with 'medium and high-risk' projects."** He further stated that the testing proposed in the NRRI report needs to be "augmented with other parameters such that a more reliable assessment of ARD potential is achieved." As the next steps, Dr. Verburg recommended geochemical testing.

This next step is necessary because in Dr. Verburg's experience, the use of "visual estimation of mineral abundances **can be fraught with significant uncertainty**, even when this is conducted by experienced geologists using a chart as the one referenced in the NRRI report. This is especially so when the percentages are small, as is the case for the sulfides in the various geologic units found in the study area (mostly less than 5%)." Further, per Dr. Verburg, "the second issue relates to the use of the sulfide content alone to estimate ARD potential. **The sulfide content is but one of many characteristics of a rock material that define its ARD potential.**"

The EA/EAW failure to disclose Dr. Verburg's conclusions and recommendations denied the public and participating state regulatory agencies access to highly pertinent information. This adversely affected the agencies knowledge of critical information and deprived the public of its opportunity to competently participate in the EA/EAW comment process.

2. THE EA/EAW IS GROSSLY MISLEADING IN IMPLYING THAT DR. VERBURG'S REPORT SUPPORTS NRRI'S CONCLUSIONS, INCLUDING THAT NO DRILLING IS RECOMMENDED FOR THE INITIAL STUDY AREA.

The EA/EAW (page 8) states that "to date, Dr. Verburg has reviewed the NRRI reports, field logs, laboratory test results, proposed construction plans, and estimates of bedrock excavations. He has also advised MnDOT on potential mitigation measures (discussed in the Recommendations section below)." The phrasing of the EA/EAW aims to give the impression that the DNR, PCA and Dr. Verburg are in full agreement with NRRI's conclusion that the projects area bedrock has generally low to no sulfur. That is not the case, as the discussion below will show.

In their report (attached as Appendix C to the EA/EAW)¹, NRRI geologists detail the following:

- "Visual estimates made during **comprehensive field observations and corroborative geochemical laboratory testing** both suggest that the bedrock in the project area generally contains **very low to no sulfur**."
- The samples were prepared following methods described in the May 2012 Addendum. Samples were tested for mass-percent of total sulfur by ACME Labs of Vancouver, BC; it was assumed that in all samples the predominant sulfur-bearing species was pyrite (mass-percent of total carbon was not tested for each sample since field observations and prior research revealed very little to no carbonate presence in the area). Laboratory testing was completed in June 2011.

¹ Appendix C, "Sulfide/Acid Rock Drainage Technical Memorandum", pages 6, 8 and 9 or EA/EAW PDF, pages 228, 230 231/296.

Response 1 and 2a – previously provided above

Matt Oberhelman Comments (page 4 of 9)

<ul style="list-style-type: none"> Based on their evaluation and knowledge of ARD/ML processes the NRRRI geologists recommend no drilling for much of the project area. 	
<p>As mentioned in Comment 1 above, Dr. Verburg’s report reaches very different conclusions which are surprisingly missing from the EA/EAW. The following key conclusions must be noted:</p>	
<ul style="list-style-type: none"> A “Project Screening” phase is essentially what is captured in the NRRRI report”. 	
<ul style="list-style-type: none"> “The results from this screening phase indicate that the Highway 169 project cannot be classified as a “low risk” project, which then triggers the chain of activities associated with <u>medium and high-risk</u> projects.” 	1
<ul style="list-style-type: none"> “Visual estimations of mineral abundances can be fraught with significant uncertainty, even when this is conducted by experienced geologists using a chart as the one referenced in the NRRRI report. This is especially so when the percentages are small, as is the case for the sulfide in the various geologic units found in the study area (mostly less than 5%).” 	
<ul style="list-style-type: none"> “The second issue relates to the use of the sulfide content alone to estimate ARD potential. The sulfide content is but one of many characteristics of a rock material that define its ARD potential.” 	2b
<ul style="list-style-type: none"> “Therefore, although a useful first step, the mapping program and visual identification of sulfide minerals represents only the very beginning of a defensible ARD assessment. Additional effort is usually required to provide a more definitive evaluation.” 	1
<ul style="list-style-type: none"> “In addition to the mining industry, in recent years, state transportation departments across the country have come to the realization that ARD is an aspect of road construction that needs to be addressed with more vigor.” 	
<p>In fact, contrary to MnDOT’s statements in the EA/EAW, by not following Dr. Verburg’s 2011 recommendations, the NRRRI field investigation did not follow established ARD BMP. These omissions, the fact that MnDOT does not address the issues raised in Dr. Verburg’s report, and MnDOT’s choice to portray the project risk as minimal, characterizing NRRRI’s methods as following established ARD BMP, raise a fundamental trust and credibility question. It legitimately begs the question of whether future rock characterization methods, site plans, and mitigation will be conducted properly in Minnesota. Not doing so will likely result in significant long-term negative impacts on the natural environmental and human health of the affected area.</p>	1
<p>Moreover, MnDOT provided to the Golder Associate consultant for review sulfur analysis that was known to have QA/QC issues (see Comment 3 below) due to sample preparation errors (as stated in NRRRI Addendum report).</p>	
<p>MnDOT failed to inform Golder Associates of the sample preparation error. By failing to inform the consultant of this issue, MnDOT failed to follow the EPA’s Guidance on Environmental Data Validation (EPA QA/G-8) standards and U.S. Department of Transportation Federal Highway Administration Geotechnical Engineering Notebook, Geotechnical Guideline No. 15, Title Geotechnical “Differing Site Conditions.” The consequences of this lapse compromise the entire EA/EAW process and critically undermine MnDOT’s credibility and the scientific foundation of its conclusions.</p>	2c
<p style="text-align: right;">4</p>	

Response 1 – previously provided above.

Response 2b - The discussion of this issue in the 2011 Golder memorandum concludes with the statement: “Therefore, although a useful first step, the mapping program and visual identification of sulfide minerals represents only the very beginning of a defensible ARD assessment. Additional effort is usually required to provide a more definitive evaluation.” As noted in the response to Comment 1 above, additional rock sampling and laboratory testing to further assess the potential for ARD has been performed since the 2011 memorandum. This additional information – and the updated Golder Associates assessment of potential risk for ARD (see Response 1 above) – will be considered by the TWG (described in Response 2a above), as the cooperative process for implementing recommendations continues.

Response 2c - See Response 3a above regarding the sample preparation issue. This issue has been reviewed with Dr. Verburg. The laboratory results from the rock samples were used by Dr. Verburg to make preliminary estimates of the quantity of limestone that could be needed to neutralize rock acidity, if this mitigation measure were to be selected for use as a result of the TWG coordination process. His estimate also included a 'factor of safety' that helps to offset variations in sampling. MnDOT requested that Dr. Verburg make this estimate to allow MnDOT to make an initial cost estimate of potential mitigation costs associated with ARD, to include in the estimated project costs included in the EA/EAW. Final mitigation measures and cost estimates will be developed following BMP/mitigation decision-making resulting from the work of the TWG.

Matt Oberhelman Comments (page 5 of 9)

3. THE EA/EAW FAILS TO ADDRESS THE CONSEQUENCE OF FATAL ERRORS MADE DURING SAMPLE PREPARATION FOR THE SULFUR ANALYSIS

Accurate sulfur analysis is a critical component for determining if the sulfide bearing bedrock has potential for generating acid and thus causing harm to human health and the environment. The underestimation of the acid production could lead to incorrect decisions regarding road placement, and ARD treatment and storage. One of the major technical deficiencies observed in this evaluation is the inaccuracy of the NRRI sulfur analysis. The Addendum report states that students preparing the samples for sulfur analysis mistakenly cut off sulfide-rich zones from samples, resulting in sulfide-barren samples being sent in for assay. Most technical deficiencies in geochemistry are averted and/or corrected by following established quality assurance and quality control (QA/QC) measures. These important measures appear not to have been implemented for this project. The sulfur value discrepancy is most apparent when calculating expected sulfur values based on the visually estimated pyrite percentages and then comparing those values to the reported laboratory sulfur values. Most of the sulfur values are extremely low when compared to the estimated sulfur values based on pyrite percentages. To obtain meaningful analytical results it is imperative that sample collection and preparation are conducted properly. Best Management Practices must be correctly followed. The ramifications of not conducting appropriate analysis can lead to long-term, costly, ineffective after-the-fact mitigation and significant harm to public health and the environment. In this instance, NRRI failed to follow the EPA's Guidance on Environmental Data Verification and Data Validation (EPA-QA/G-8) standards and U.S. Department of Transportation Federal Highway Administration Geotechnical Engineering Notebook, Geotechnical Guideline No.15, Title Geotechnical "Differing Site Conditions."²

3a

Based on this analysis, NRRI concluded that "the bedrock in the initial study area generally contains very low to no sulfur" and thus recommended no drilling for the initial project area, which entails the entire "south route" of the hybrid preferred route. The route runs parallel to strike of the iron formation which is noted as the geologic formation most likely to contain sulfides. This unsubstantiated conclusion based on a flawed analysis is most concerning.

3a/4b

Moreover, the EA/EAW map figures 3-5 (east cut area, middle cut area and west cut area) found in Appendix A of Appendix C³ actually dispute NRRI's interpretation that bedrock in the project area generally contains "very low to no sulfur." The figures show numerous hot spots showing sulfur values greater than 0.15 wt %. One should recognize that the sulfur values are most likely lower than the material sampled due to the sample prep errors stated in NRRI's Addendum report. The NRRI reports also mention numerous sulfide exposures with a myriad of forms of pyrite. Both syngenetic and epigenetic sulfide modes are observed. The numerous sulfide surface exposures may only be the "tip of the iceberg" of the true sulfide extent. The NRRI geologists' evaluation and conclusions do not follow accepted ARD protocol for triggers and thresholds.

3b

² The sulfur analysis and acknowledgment that student workers sample preparation errors occurred is stated in NRRI's addendum report entitled [NRRI/TR-2012/20_Severson and Heine, 2012](#) — An addendum to: Geology and sulfide content of Archean rocks along two proposed Highway 169 relocations to the north of Sixmile Lake, St. Louis County, northeastern Minnesota, and Geologic investigations in the Armstrong Lake area, By [M.J. Severson and J.J. Heine](#), 83 p. It is available at NRRI's public website <http://www.nrri.umn.edu/egg/REPORTS/TR201220/tr201220.html>.

³ See Appendix C - Sulfide/Acid Rock Drainage Technical Memorandum (pdf pgs. 237-239) are referenced from the report: Sulfur Data and Related Geologic Information for the Hwy. 169 Southern Route Road Construction Project. September 2, 2011, authored by DNR Division of Lands and Minerals, Mineral Potential Section Supervisor, Dennis Martin

5

Responses 3a and 4b – previously provided above.

Response 3b - The NRRI 2012 report indicated that the field geologists took samples from 'hot spots' (e.g., at veins and cracks where iron staining was clearly visible, potentially indicating higher sulfur content areas) at a frequency that exceeded the overall frequency of such occurrences along the proposed alignment. This included the 'hot spots' shown in the figures referenced in this comment.

Dr. Verburg's March 2015 memorandum (page 3, see Appendix E2 of the Findings) discusses why he finds that the analytical results indicate that the overall sulfur content along the proposed alignment is low, and "...even more so when considering that the NRRI sampling specifically targeted areas with visual evidence for elevated sulfur. Of the 157 samples collected, 95 were randomly obtained from so-called 'generic rock types' while the remaining 62 samples (approximately 40%) were collected from so-called 'anomalous sulfide zones' (Severson and Heine 2012). Despite this focus on areas with elevated

sulfur, only 12% of the 157 samples contained sulfur in excess of the preliminary threshold of 0.15 wt. %.”

As noted in Response 3a above, as part of the on-going agency coordination process, the members of the TWG will have the opportunity to review the sampling data collected to date [including NRR1’s work] along with other pertinent project information [e.g., overall geology, location of faults, locations of cut vs. fill for the project, etc.], to determine if and where additional data collection is warranted.

Matt Oberhelman Comments (page 6 of 9)

<p>The EA/EAW does not address this critical lapse in the sulfur analysis and the resulting baseless conclusions. It failed to request that the samples be recollected and analyzed.</p>	<p>3a</p>
<p>4. MNDOT'S DRILLING PLAN AND NRRI'S DRILLING RECOMMENDATIONS ARE INAPPROPRIATE FOR THIS SPECIFIC GEOLOGIC ENVIRONMENT.</p>	
<p>A power point version of MnDOT's detailed drilling plan for the project area that provides drilling frequency, locations, depth, drill core handling and storage, drill core logging, sample prep, sample interval, sampling methods and drilling examples was also withheld from the public and is not included in the EA/EAW. The plan uses a blanket sampling of the entire project on somewhat of a grid or station-based spacing, which is not appropriate for this geologic environment. Focused sampling in the medium- to high-risk APR zones is more appropriate in the context of ARD mitigation plans. ARD testing through the construction process is also recommended for this specific geologic environment.</p>	<p>4a</p>
<p>Further, the drilling recommendations by NRRI geologists are inadequate. Sufficient drilling to adequately describe subsurface conditions is the responsibility of the geologist or project engineer. If potential acid producing rock (APR) is present or expected to be present at a site, sufficient drilling to define these areas needs to be performed. Triggers and thresholds described in the Tennessee, Pennsylvania and Virginia DOT ARD guidelines have clearly not been followed. The drilling plan lacks a site specific sampling component for the medium to high-risk areas. Focused sampling in the medium- to high-risk APR zones is more appropriate and useful in implementing ARD mitigation plans.</p>	<p>4b</p>
<p>Unfortunately, the ARD field evaluation was conducted by economic geologists who do not specialize in ARD evaluation and, as Dr. Verburg's comments and recommendations make evident, do not have an adequate understanding of the established methods and practice required for defensible ARD evaluation.</p>	<p>4c</p>
<p>5. THE EA/EAW FAILS TO ENSURE THAT APPROPRIATE ROCK CHARACTERIZATION, CHEMICAL ANALYSIS AND THUS PROPER MITIGATION WILL BE CONDUCTED.</p>	
<p>The EA/EAW failed to recognize the risk of accepting geologic interpretation of sulfide mineralization potential in a complex epigenetic hydrothermal geologic environment, without adequate geochemistry and subsurface sampling. This is particularly concerning considering that the proposed route follows the strike of the geologic formation identified as the geologic unit with the highest potential of encountering sulfides. As Pennsylvania found out the hard way, cleaning up toxic pyrite rock is extremely costly (\$83 Million in that case).</p>	<p>5a</p>
<p>Mitigation of ARD and metal leaching (ARD/ML) will only work when all processes of evaluation and implementation are conducted correctly. Even in that case there is still a risk of failure. The field and laboratory evaluation on which the EA/EAW rely underestimates sulfide/sulfur content in the potential blast areas which could result in significant environmental harm. The inaccurate data and geologic interpretation will lead to inadequate mitigation practices.</p>	<p>5b</p>
<p>The EA/EAW is also deficient in its estimation of the potential cost of mitigation. The mitigation estimates are based on the current geochemistry dataset, known to have QA/QC issues (see Comment 3 above). In light of the elevated risks highlighted in Dr. Verburg's report, the current funds reserved for mitigation appear to be greatly inadequate and it is highly probable that mitigation will be underfunded.</p>	<p>5c</p>
<p>6</p>	

Responses 3a, 4a, 4b, and 5 – previously provided above.

Response 4c - The field evaluation was conducted by geologists with substantial experience in mapping and rock sampling/characterization in the project vicinity. None of the agency staff or consultants involved in this project has questioned the capability of the geologists to perform the field review and sampling. The interpretation of the data collected – and determination of how it relates to characterizing and managing the risk for potential ARD – will be conducted by the TWG, which includes staff from MnDNR, MPCA, MDH, USEPA, MnDOT and FHWA, as well as MnDOT's ARD technical expert Dr. Verburg (Golder Associates).

Response 5a - The field evaluation was conducted by experienced geologists with a thorough understanding of the overall geologic setting and sulfide mineralization processes typical of formations in the project vicinity. The rock formations in this area are essentially vertical, so the 'complex' rock characteristics observed at the surface are not likely to be fundamentally different from subsurface conditions. Therefore, there would not be a substantial benefit from subsurface sampling and additional geochemistry work in the pre-design/NEPA phase of the project -- the results of the sampling conducted to date are adequate to characterize the overall potential risk for ARD and the process for managing that risk, for the purpose of making a NEPA determination on the need for preparing an EIS.

As noted previously, the members of the TWG [see Response 2a above] will have the opportunity to review the geologic setting and rock sampling data collected to date along with other pertinent project information [e.g., overall geology, location of faults, locations of cut vs. fill for the project, etc.], to assess if and where additional data collection is warranted to inform development of best management practices.

Response 5b - The road alignment does follow the strike of a geologic unit, but it's a geologic unit that was reviewed, characterized, and sampled during NRRI's field review and, due to the vertical dip of the formation (as described in Response 5a above), the rock characteristics observed at the surface are not likely to be fundamentally different from subsurface conditions.

Response 5c - As noted in Response 3b and in Golder Associates March 2015 memorandum (page 3, see Appendix E2) the field sampling used for laboratory analysis was biased towards areas with elevated sulfur. Preliminary estimates of limestone quantities required to account for the potential acid generation capability of the rock material along the proposed alignment [used to estimate potential mitigation costs for the project cost estimate] were based on the analytical sulfur data, not the visual estimates. Each analytical result was given an equal weight in the calculation of limestone demand. Therefore, the resulting limestone quantities also likely represent an overestimate given the focused (over-representing the visibly high-sulfur areas) sampling conducted to date.

These estimates were preliminary, for initial cost estimating purposes only. The BMPs and mitigation strategies that will be implemented for the project will be developed through the cooperative work of the TWG.

Matt Oberhelman Comments (page 7 of 9)

<p>In addition, the EA/EAW does not address the following:</p>	5d
<ul style="list-style-type: none"> - Whether sulfide encapsulation will occur on private lands purchased for this project. - The long term management of encapsulation facilities. - The level or significance of any hazardous cleanup efforts should mitigation fail. - The potential property value loss to landowners if a sulfide containment facility is placed on or near their current property, and the potential related litigation costs. - Whether long-term post-closure operations and maintenance or monitoring may be necessary (description of these activities, of their projected costs, and any additional requirements are missing). - Metal leaching potential with a detailed risk assessment. Geologic literature states Sixmile Lake sediments have some of the highest copper values in the State of Minnesota. - The potential for neutral leaching of metals from new rock cut faces and crushed fill material, and if sensitive biological receptors reside within or immediately downstream of roadside ditches. 	5d
<p>6. ADDITIONAL TECHNICAL DEFICIENCIES OF THE EA/EAW</p>	
<ul style="list-style-type: none"> • The EA/EAW does not contain a hydrological study component. When siting sulfide containment locations it is critical to have knowledge of the areas hydrologic conditions to ensure no degradation of surface and ground water will occur; including but not limited to ground water recharge zones, streams, spring, lakes and domestic wells. This deficiency is highly problematic considering that this area is noted for clean water resources and that the public and residents depends on clean water for domestic drinking and recreation. 	6a
<ul style="list-style-type: none"> • The EA/EAW is deficient in that the Water Sampling was only conducted for pH and sulfate. Tennessee Guideline 4.3 Water (page 35) states that there are several water chemistry indicators for the presence of acid potential rock, pH and sulfate <u>in combination</u> with the following are recommended: <ul style="list-style-type: none"> - total iron greater than 7 mg/L, - total manganese greater than 4.0 mg/L, - other dissolved metals greater than EPA MCLs, - elevated acidity, and - elevated conductivity (>2,000 µS/cm, depending on background) 	6b
<ul style="list-style-type: none"> • The EA/EAW inaccurately states that crushing rock to +3" or =6" in size will create low available surface area for potential oxidation. Blasting and crushing bedrock to this size fraction will drastically increase the available surface area and expose fresh sulfides to weathering resulting in increased potential for ARD. It is important to note that blasting/crushing will also increase fractures and parting along bedding planes and will thus expose more sulfides to air and water. Fines will also be increased from this process⁴. 	6c
<ul style="list-style-type: none"> • Discrepancy with the Precambrian Research Center's 2013 Geologic Interpretations. The EA/EAW's description of the iron formation for this general area and that of the 2013 Precambrian Research Center (PRC) Gafvert Lake Capstone Project (supervised by Dean Peterson, Vice President of Exploration at Duluth Metals, PRC/MAP-2013-04) do not match. The 	6d
<p>⁴ See, page 60 in V. Social, Economic and Environmental Impacts, Appendix under 10. Geology, Soils and topography/Land Forms, <u>Recommendations</u> (found on pdf pg.72/296 of the CD.)</p>	
7	

Response 5d - The issues identified in this comment were not addressed in the EA/EAW because it is not a 'given' that they will actually occur with this project. The process (described in Section V.A.10.a.- Recommendations of the EA/EAW) for working through the issues related to ARD with the Technical Work Group (TWG) [described in Response 2a above] will further assess the risk for ARD, identify Best Management Practices to be incorporated into the project, and if/what post-construction monitoring is needed. The intent of the TWG process is to identify and control risks, to avoid potential impacts including the scenarios listed in this comment [e.g., the need for 'encapsulation facilities' or 'hazardous cleanup,' potential 'property value loss,' metal leaching, etc.]. The potential ARD impacts can be anticipated and controlled through the TWG process, which includes staff from agencies (MPCA and MnDNR) with experience with sulfide rock in Minnesota and also includes expert consultant staff (Dr. Rens Verburg from Golder Associates). By using this process and implementing BMPs and mitigation

into the project, MnDOT can anticipate and control potential environmental and private property effects related to sulfide-bearing rock.

Responses 6a through 6d – previously provided above.

Matt Oberhelman Comments (page 8 of 9)

<p>PRC mapped the iron formation in the project area as contains regionally pervasive sulfide mineralization; and a cherty member as containing regionally pervasive sulfide burn.</p>	6d
<ul style="list-style-type: none"> • The EA/EAW fails to address the high arsenic anomalies identified in the 2004 NRRI report entitled Regional Till Geochemical Survey of the Western Vermilion Greenstone Belt, Minnesota. The study identified arsenic and heavy metal anomalies within the Highway 169 Eagles Nest project area. The EA/EAW further fails to determine whether the proposed disturbance of mineralized bedrock will become a potential source for the release of arsenic, heavy metals and acid drainage. Also, the degree to which the glacial till and bedrock is arsenic enriched and the potential for liberation of the arsenic exposed from disturbing the till and bedrock through road construction must be a consideration in managing the long-term containment of this material. 	6e
<ul style="list-style-type: none"> • The NRRI geologists failed to conduct an adequate literature search pertaining to the project areas geology and mineral potential of the area. The geologists failed to reference or consider publications on this matter. 	6f
<p>CONCLUSIONS AND RECOMMENDATIONS</p>	
<p>The Regulatory Agencies decision as stated in the EA/EAW to not consider rock excavation volumes as critical⁵ ignores established BMP protocol from Virginia, Tennessee, and Pennsylvania DOT ARD Guidelines for highway construction as well as the criteria followed by State of Minnesota in Lake Vermilion State Park, Northshore mine, PolyMet.</p>	8
<p>The agencies decision is fatally flawed in that it assumes NRRI’s conclusion that the “bedrock in the project area generally contains very low to no sulfur” is defensible and accurate. The Golder reports states this project falls in the moderate and high-risk category. Since BMP have not been adhered to in the initial ARD screening, it is irresponsible of the agencies to say site selection is not a critical factor in an ARD evaluation, unless there are unlimited funds allocated for this project. This decision is not scientifically sound and appears to want to ignore the history of Interstate-99 “Skytop” project in Pennsylvania.</p>	2b 8
<p>The EA/EAW’s conclusion that the north route has higher sulfide content than the south route is incorrect and not defensible. The north route exhibits limited outcrop exposures, it appears construction would mostly require fill with little disturbance of bedrock. The statement “The main concern regarding the north route is that the rocks beneath the wetlands along this corridor appear to contain a much higher sulfide content based on geologic trends of geologic units” is very speculative. The geologic trends mentioned to justify this are based on drill core located 0.36, 0.65, 0.8, and 1.5 miles from the road project, the drilling targeted a geophysical conductor that appears to not underlie the majority of the northern route. A notable technical deficiency in the report is the lack of quantitative data to support geologic interpretations and on the north route of actual data points, which limits the level of confidence in the resulting interpretation and conclusions. If this report is the basis for determining the siting of a \$20 million project that may cause significant short and long term environmental harm (depending on sulfide levels of excavated materials), appropriate bedrock characterization by means of core drilling with geochemical analyses should be required on both routes. Engineering conclusions should not be based on presumed geology.</p>	7
<p>⁵ See pg. 21, Appendix A Highway 1/169 Eagles Nest Project - Alternatives Development & Evaluation Technical Memorandum (pdf pg. 197/296)</p>	
<p>8</p>	

Responses 2b, 6d – 6f, 7, and 8 – previously provided above.

Matt Oberhelman Comments (page 9 of 9)

Environmentally, the main difference between the two routes is that the south route requires blasting through undetermined amounts of sulfide bearing bedrock and the north route requires large amounts of fill through a wetland. It should be noted that the exiting highway was built along the edge of the same wetland/geologic trend mentioned as a concern for the north route with no known environmental issues. One should question why improving the previously selected middle route was not selected since it would have the least adverse impact on the environment and it had already been deemed as a route of choice until political intervention⁶.

7

To remedy these material failures of the EA/EAW, the following steps need to be taken and committed to in writing, with the relevant parties held accountable:

1. **MnDOT should be required to perform a formal Environmental Impact Study (EIS) of the sulfide issue which a realignment may cause.** Final site selection should be made following completion of the EIS. An EIS should provide more detailed descriptions of how site assessment, sampling and testing, triggers and thresholds, mitigation prevention and treatment, and monitoring will be conducted.
2. **MnDOT should be required to perform sampling/testing prior to beginning construction MnDOT should be required to define and be ready to execute a mitigation plan based on this testing to be included in the EIS.**
3. **The DNR and MPCA must have an “oversight” role and be required to conduct proper testing and mitigation if sulfides are encountered, following the avoid/minimize/mitigate sequence.** A major flaw in Minnesota’s environmental review process for highway projects is that MnDOT is also the RGU. Project development and environmental review by the same group within an agency creates a conflict of interests which can bias the decision process. Other qualified state agencies should be given more authority in the review process, particularly with moderate to high risk projects such as this one. This is necessary to achieve an unbiased review and appropriate government transparency.
4. **MnDOT must engage a qualified consultant with ARD expertise (such as Golder Associates) to design and implement proper site testing and mitigation plans if sulfides are encountered, following the avoid/minimize/mitigate sequence.** Field verification must also be conducted by the consultant to ensure BMP are correctly being followed.
5. **The difference in rock excavation volumes among alternatives should be considered a key factor in selecting a preferred alternative route and reconstruction within the existing corridor must be reassessed.**

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⁶ See pg. 6 Highway 1/169 Eagles Nest Lake Area Project Area Geologic Investigations Phase 1: Field Investigation-Sixmile Lake Area and 2010, Geology and Sulfide Content of Archean Rocks Along Two Proposed Highway 169 Relocations to the North of Six-Mile Lake, St. Louis County, Northeastern Minnesota: University of Minnesota-Duluth, Natural Resources Research Institute, Technical Report NRRI/TR-2010/31.).

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Responses 7, 8, and 9 – previously provided above.

Linda Ross Sellner Comments (page 1 of 6)

January 23, 2014 

To: MN DOT District 1 Duluth
c/o Mr. Michael Kainbach

From: Linda Ross Sellner
402 W. Arrowhead Rd.
Duluth, MN 55803

Re: EAW for Highway 1/169 Rebuild, Eagles Nest Lake Area

Public Comment

I Have a Geology Degree with a Biology Minor from the University of Minnesota, am certified in GIS and currently serve on the Duluth Public Utilities Commission which oversees the Water, Natural Gas, Sanitary Sewer and Stormwater Utilities. My comments are my own.

Introduction

Thank you for the opportunity to voice my professional opinion on this extensive document prepared by the MN DOT. Many DOT employees were surely involved in its preparation as well as having additional consultation from a geologist and companies such as Golder Associates. I on the other hand, speak as one citizen, with perhaps a little more time and pertinent education.

The RGU for the State is also the MN DOT. This constitutes a conflict of interest and leaves the document highly suspect for bias in favor of the project. | 1

An EAW is prepared to prove Findings of no Significant Impact to the environment and therefore, no need for an EIS. To claim this extensive project, in any of its alternatives, has no significant impact, is ludicrous. The length, detail and number of charts should serve to prove the truth of the previous | 2

Response 1 - MnDOT's role as RGU for this project is consistent with state statutes for environmental review. Per Minnesota statute 4410.0500, for any project listed in 4410.4300 (Mandatory EAW categories), the governmental unit specified in those rules shall be the RGU unless the project will be carried out by a state agency, in which case that state agency shall be the RGU.

Response 2 - Per State and Federal regulations the purpose of the State EAW and Federal EA is to determine whether there is potential for significant adverse impacts and therefore the need to prepare an EIS. This determination is made after MnDOT (EAW RGU) and FHWA (lead Federal agency) assess the EA/EAW document and supporting documents, public and agency comments on the EA/EAW distributed for review/comment, and the Findings of Fact and Conclusions.

Linda Ross Sellner Comments (page 2 of 6)

statement while they do not serve to replace the negative environmental impact. | 2

Finally, if this is the process for coming in confrontation with the purpose and methods of this project (having limited access to the “Task Force”, limited influence on congressional lobbying and limited ability to force legislation as an individual citizen vs. MN DOT), it is virtually impossible for an average citizen to offer criticism that will lead to an EIS at worst and hopeful abandonment of the project, at best.

First, I would like to comment on the Project Purpose and Need:

This section of road is a MINOR ARTERIAL ROADWAY. It has a reasonable speed limit of 55 mph for the rural setting and geography of the road. It connects two comparatively SMALL towns—Tower Soudan and Ely. Linking this roadway to Virginia and Winton and calling it a corridor for average citizens to get to shopping centers and employment is misleading. I believe this corridor will serve logging interests and Twin Metals copper mine near Ely. Perhaps the premature promise of this upgrade was instrumental in securing the recent mine purchase by Chilean-based Antofagasta.

The substantial concern for safety as a purpose also needs argument. It is beyond the scope of any entity to take on the responsibility for individual driver’s risk-taking or quality of driving! Increasing the speed limit—no matter what changes are made is counterintuitive. Speed increases always lead to reduced safety and less reaction time yet are part of this plan. | 3

Infrastructure conditions are also claimed a “Primary Need” for the project. The photo on pp.5 has no identifying location on Hwy 1/169. In contrast, the cover photos of the document reveal pavement in good condition. | 4

Nevertheless, if the pavement needs replacement, this does not justify the need for the rest of the work planned for this stretch of road. If this project goes ahead, I feel it will serve as justification for future work of equal negative environmental impact to Hwy 1, also given a poor RLS rating on pp4. It seems left hand turn lane pavement extensions are in order for legitimate safety concerns and I would support these. Geometric design deficiencies are also in question. Why would 1940s deficient design standards (as stated) have been used for a road constructed in the next decade? Proper signage for blind spots | 5

Response 2 – see previous page.

Response 3 - The project does not include an increase from the existing posted speed limit of 55 mph.

Response 4 - The need for pavement replacement is one element of the overall project need. Other needs include safety improvements, mobility issues, and design deficiencies.

Response 5 - As noted on page 6 in Section II.C. Need for Proposed Action of the EA/EAW, this highway corridor was designed and constructed to the standards of the 1940’s when vehicles were generally travelling slower and there were fewer large vehicles (trucks, vehicles with trailers) compared to today’s road users. When a section of highway is being reconstructed (i.e., for this project, to address safety and the deteriorating pavement, identified as a primary needs on pages 3-5 of the EA/EAW), it provides an opportunity to improve the roadway design, to bring it up to standards appropriate for today’s vehicles.

Linda Ross Sellner Comments (page 3 of 6)

and intersecting roads leaves prudent driving up to the driver, where responsibility lies. Horizontal and vertical curves are appropriate for this rural setting road—original construction having probably tried to actually minimize environmental impact and SAVE money on construction costs. Reducing steep side slopes “for vehicles to recover if they go off the road” as well as removing roadside, mature trees so drivers can see more openness, is going beyond any reasonable accountability that should belong to drivers and works against an aesthetically pleasing road appearance.

6

At this point, since I have tried to justify the Level 1 Alternative of No-Build, I have neither the time nor the desire to scrutinize all the other Build Alternatives—contrary to MN-DOT and the league of persons involved in this section of the document. Instead, I would like to comment on some items required in the actual EAW in chronological order.

7. Cover Types

GIS land use/land cover datasets can give an accurate “Before” parameter for comparison of acreages of cover types. To say the “After” acreages qualify then, as input for *estimations* for differences in alternatives and “are subject to change throughout the design and construction phases of the project” is extremely disturbing to my knowledge of GIS capabilities and leaves conclusive evidence lacking.

7

9. a. iii. b

The western third of this project will go through “undeveloped, primarily forested land”, yet because household development of the land is occurring more often along water, this is used as justification for stating land use will not change. The EAW question asks the writer to concentrate on implications for environmental effects. Primarily forested land may not have a zone or special overlay, but dictates the environmental use of the land by wildlife. We need to consider other species besides house-building humans.

8

10. Geology

All the Alternatives would require extensive rock excavation, rock fill and exposition of sulfide-bearing rock, the report says. ARD is discussed and a geologist (Dr. Verburg) is consulted. His comments confirm the necessity of

Response 6 - The slope modifications and vegetation clearing are proposed to improve roadway safety.

Response 7 - The EA/EAW text states that the “estimations are based on preliminary design information and are subject to change throughout the design and construction phases of the project”, to recognize that design refinements continue to occur as a project works through the design and construction phases; therefore, the estimated cover types impacts may change over time, as the design is refined. The estimates included in Table 6 allow for comparison of the relative cover type impacts among the three Build alternatives compared in the EA/EAW.

Response 8 - The intent of EAW Question #9 is to address land use and the built environment. EAW Question #13 addresses fish, wildlife, plant communities, and sensitive ecological resources.

Linda Ross Sellner Comments (page 4 of 6)

mitigation necessary from a buffering agent. Comparing this sulfide-bearing rock volume to mining rock volume, both with ARD repercussions, and negating the concern due to relative amounts as MN DOT does, is deceptive as the lesser of two evils. Acid drainage is an environmental threat to health and functionality in whatever amount it is created! The “use of limestone or other neutralizing materials to MINIMIZE ARD” shows lack of understanding of the toxicity of this substance. Crushed, waste cement would be a likely candidate for buffering and would be a pollutant to water itself. How would buffering be applied to newly-exposed bedrock faces, even though “of less concern”? Water exposure leading to enhanced acid formation in a water-rich environment such as this, especially with extensive wetland removal and their potential storage of water, is a huge concern. Why is necessary limestone buffer calculation being left to “the third party expert” when Dr. Verburg is given credit in the EAW for calculating the quantity needed? Are these one and the same? The future management of this toxin is left unresolved in regards to success with no significant effect to water quality the claim. This issue is too dangerous and persistent to leave to the future or to make such a claim. Leave the sulfide in the rock and do no new excavation nor create more surface area, is my professional opinion.

9

11. a. ii.

This project will require treatment of stormwater prior to discharge offsite. It proposes to utilize vegetated side slopes, grassed roadside ditches and sediment filtration through wetland basins. However, extensive wetland elimination is proposed for all Alternatives except No Build. How much of a functioning watershed can be hydrologically eliminated yet still function to filter sediment in stormwater runoff? What of the time lapse before vegetation is re-established? Treatment of a maximum of one inch of runoff over the new impervious area is dreadfully ambivalent toward the scientific predictions of increased and severe precipitation events predicted with climate change.

10

Response 9 - This comment contains a number of inaccurate statements about the content of the EA/EAW. 1) The EA/EAW does not state that Dr. Verburg’s “comments confirm the necessity of mitigation necessary from a buffering agent.” Page 60 notes that Dr. Verburg provided advice regarding “reasonable methods for calculating the quantity of buffering agent...” Use of limestone was identified (on page 61 of the EA/EAW) as one of a number of possible best management practices (BMP) that could be used. If this is determined to be a BMP that will be used for the project, the calculations would be made by a ‘third party’ who could be Dr. Verburg, or could be another qualified person. 2) The EA/EAW does not compare the “sulfide-bearing rock volume” (from the project) “to mining rock volumes.” 3) The EA/EAW does not suggest use of waste cement as a neutralizing agent.

As stated in the EA/EAW, the potential risk for ARD can be managed through the coordination process described in the Recommendations discussion in Section V.A.10.a. in the EA/EAW, to avoid adverse environmental impacts. This coordination process has been initiated since publication of the EA with the formation of a Technical Working Group (TWG) comprised of staff from MnDNR, MPCA, MDH,

USEPA, MnDOT and FHWA, as well as MnDOT's ARD technical expert Dr. Verburg (Golder Associates). Through their participation in the TWG, regulatory agency staff will be able to provide on-going input regarding potential concerns related to ARD and to provide input on proposed strategies to address those concerns.

Response 10 - As stated in Section V.A.11.a.2 of the EA/EAW, stormwater treatment and best management practices will be provided, consistent with NPDES Construction Stormwater permit requirements.

Linda Ross Sellner Comments (page 5 of 6)

11 .a. iv. a)

While the EAW is complete in identifying each wetland-related agency's necessary approval for wetland removal, the fact remains that historically, wetlands are allowed to be destroyed even with legislation to the contrary. Has the Army Corps of Engineers ever denied a permit to MN DOT? This report even makes a point of italicizing the way around supposed wetland preservation and minimization of impact. On pp. 81, the Clean Water Act permitting process's second paragraph quoted negates the first! And so it goes—wetlands and the important functions they provide in a healthy environment get filled, dredged and drained. We have only a fraction of the wetlands characteristic of pre-development and the decrease in water quality to match that loss, yet this and other projects are never held back due to wetland destruction associated. While the pull-out chart/table 11 intimidates most readers into submission to content for its extension, to state that "None of the alternatives are anticipated to have significant environmental consequences" on pp. 80 is again, ludicrous.

11

12

13.

This section analysis is now obsolete. Wolves in the Great Lakes region are back to having federal protection since this document was produced. Eminent Endangered status to protect northern long-eared bats will require habitat protection. The location proximal to Tower Soudan is habitat and will be partially destroyed with this project in regards to tree/forest removal and blasting of rock. Habitat consistency is also a factor to be considered with moose, yet moose and their exponential demise in population are not of any concern here. This is prime moose habitat and this project will remove native cover and wetland habitat to reconstruct the road—both detrimental to moose survivability under attack from climate change and DNR "research" methods. Stating that MN DOT will continue working with the USFW Service through a voluntary informal conference (pp. 102) in regard to species protection does not temper my concerns.

13

14

15

Response 11 - The italics were added in the quotations (page 81) from Section 404 regulations to allow the reader of the EA/EAW to more easily correlate the factors compared in Table 12 of the EA/EAW with the LEDPA requirements under Section 404.

Response 12 - The statement quoted in this comment is from the unique habitat and Section 7 assessment described in the "Significant Environmental Consequences?" column of the table on page 80 of the EA/EAW. The assessment in this column focused on Section 7 implications, based on input from US Army Corps of Engineers staff regarding what they typically use as the basis for responding to the factor of 'significant environmental consequences' in the LEDPA determination.

Response 13 - The re-listing of the gray wolf occurred just prior to release of the EA, so there was not time to add this to the EA/EAW. Section 3.2.4 of the Findings of Fact document summarizes the Section 7 determination regarding the gray wolf, and Appendix D includes correspondence with USFWS regarding their concurrence with the determination.

Response 14 - The response to EAW Question 13.c. documents the steps that would be taken should the Northern Long-Eared Bat (NLEB) species listing status change from proposed to either threatened or endangered prior to project completion. The NLEB has recently (May 2015) been listed by USFWS. Sections 3.2.3 and 3.3.1.9 of this Findings of Fact and Conclusions document provides updated information on this issue

Response 15 - None of the regulatory agencies expressed concern about possible project impacts to moose populations.

Linda Ross Sellner Comments (page 6 of 6)

15.

Scenic beauty is important in the last vestiges of rural landscapes and important to those who reside or travel in this area. Wider shoulders and clear zones do not make for visual aesthetics. Should the project go forward, tree planting to replace even a fraction of the acres of clear-cut necessary is only a *possibility* for MN DOT; revegetating disturbed areas *may* be included, as stated on pp. 104. Visual resources will surely be impacted yet, the EAW states “very little change in the visual setting is anticipated with any of the Build Alternatives” and quantified for “residents close to the existing highway” ONLY. Do vacationers and the general population need no consideration here? Yet, they are saturated with safety concerns as the purpose of this project despite its extremely negative environmental impact.

16

Respectfully Submitted,

Linda Ross Sellner



Response 16 - The EA/EAW Section V.A.15 acknowledges that the primary visual change from the project would be from wider shoulders and clear zone. These impacts would not be potentially significant. The assessment of visual impacts in the EA/EAW is consistent with the 2013 EQB guidance ‘EAW Guidelines: Preparing Environmental Assessment Worksheets’, for EAW Item 15: Visual.

Kurt Soderberg Comments (page 1 of 2)

January 25, 2015

Michael Kalnbach, P.E.
District 1 Project Manager
Minnesota Department of Transportation
1123 Mesaba Avenue
Duluth, MN 55811

Re: Comments regarding Hwy 169 Project between Six Mile Lake Road and Bradach Road

Thank you for the opportunity to provide written comments on the Preferred Alternative presented at the Public Meeting in Ely on January 21, 2015.

First, I am in favor of the project overall and the preferred alternative and would like to discuss the reasons for that support and to also provide comments that might improve the project.

1. The first thing to provide to you is support for the project overall. The rebuilding of this section has been delayed for too many years and now is the time to proceed expeditiously to finally get the project completed. We have heard grumbling among folks who think that only a basic rebuilding would suffice in this area, but we strongly disagree.

My wife and I are year-round residents on the Trygg Road that enters Highway 169 at about the midpoint of this project. Between the two of us, we drive on either the westerly or easterly section hundreds of times a year. We have seen all sorts of unsafe conditions and actions over the years and the construction of the current road does not allow for safe driving, safe passing, or safe emergency stopping. Since we have owned property at this location for nearly 32 years, I have driven, biked, run, and walked along this road and can speak from experience just how important a major rebuilding is for this section of Highway 169.

2. Another major important reason for supporting the project overall is relates directly to safety.
 - a. Specifically, this project will add adequate shoulders, reduce hairpin turns, and provide far more turn lanes for access to roads like the one on which we live, as well as the Bearhead Lake State Park Road. I have seen far too many drivers attempting to pass other drivers intending to turn who have attempted to pass in areas where this is just not appropriate.

Kurt Soderberg Comments (page 2 of 2)

- b. With regard to this specific alternative it is the preferred alternative because it will dramatically improve sight lines throughout most of the route and will provide significant passing opportunities. An improvement that is not included would be to add actual passing lanes in this section. | 1
- c. The decision to move the westerly section up to the ridge top will eliminate the most dangerous section of the road, particularly during winter driving conditions when the opportunities for melting are few during the day, causing black ice to form and allowing drivers to drive faster than the conditions allow because it looks safe. It is also the move to the top of the ridge that allows for the increased passing opportunities.
3. The final reason for supporting the alternative is because the construction itself would only necessitate minimal detours. Detours could have disastrous consequences for the residents of our Township who might have medical care or ambulance service delayed significantly or unavailable due to a construction detour. In addition, it would be a significant issue for tourists and local residents who need to use the road for access to Ely or Tower. I appreciate that MNDOT has taken the detour minimization as a serious consideration.

My final comments are regarding the concerns expressed by some residents of our Township who have worked to delay this project about the potential contamination of sulfide-containing rock. I believe that this issue has been properly studied and that if more rock is found that needs mitigation that MNDOT will address that during construction. Individuals whose land is nearer to the project have raised many of the concerns regarding sulfide-containing rock. While not an issue to be overlooked, it should be noted that if their goal is to change the route away from their land, there could never be enough study to satisfy them. Please move ahead now with this project.

Thank you for taking the time to adequately study this project and to make a hybrid recommendation for routing. Please accept this letter of support as part of the written record on this project.

Sincerely,

Kurt Soderberg
1370 Trygg Road
Ely, MN 55731

218-365-5219 (H)
218-343-9161 (C)

Page 2 of 2

Response 1 – The Preferred Alternative includes provision for 22,700 feet of passing opportunities along the 5.7 mile project length. A passing opportunity is defined as segments of highway where legal passing zones will be provided. Passing lanes, which are additional traffic lanes provided to accommodate passing vehicles, are not part of the Preferred Alternative. Passing lanes were not included because of the environmental impacts associated with the extra road width required to accommodate the additional lanes.

John Welle Comments – Aitken County Engineer



Fw: EA Comments
Chris Hiniker to: Bob Rogers

12/23/2014 01:37 PM

History: This message has been replied to.

From: Kalnbach, Michael K (DOT)
Sent: Tuesday, December 23, 2014 1:27 PM
To: Kalnbach, Michael K (DOT)
Cc: Straumanis, Sarma (DOT); Ross, Jennie (DOT)
Subject: EA Comments

I received a phone call today from John Welle – Aitkin County Engineer. Johns comment on the EA is that the Bank Service Area and Major Watershed noted on page 87 of the document are in error. | 1

Michael

Michael K. Kalnbach, P.F.
District 1 Project Manager
Minnesota Department of Transportation
1123 Mesaba Avenue
Duluth, MN 55811
218-725-2745
michael.kalnbach@state.mn.us

Response 1 – The Findings of Fact document Sections 3.2.1 and 3.3.1.4 include updated/corrected information regarding the wetland Bank Service Area and Major Watershed. Wetland impacts will occur in Bank Service Area (BSA) 2 and Major Watershed 73 (Vermilion River). Wetland mitigation for wetland impacts associated with the Preferred Alternative will likely be mitigated through debit of suitable credits from bank accounts in BSAs 1, 3, or 5. The proposed wetland mitigation follows the approach in the *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota* (USACE 2009) and the Minnesota WCA Rules.

Terry Anderson Comments and 27 co-signers (page 1 of 2)

----- Message from Terry Anderson <terry@alwaysknownas.com> on Fri, 30 Jan 2015 11:34:20 -0600 -----

To: "Kalnbach, Michael K (DOT)" <michael.kalnbach@state.mn.us>
Subject: Comments on Trunk Highway 1/169 Improvement Project (Eagles Nest Lake Area)

To: Michael Kalnbach, P.E.
Minnesota Department of Transportation, District 1 – Duluth
1123 Mesabi Avenue, Duluth, MN 55811

Michael,

I'm writing on behalf of myself and other property owners in regards to the Trunk Highway 1/169 Improvement Project (Eagles Nest Lake Area). The current status of this project is that MNDOT has recommended a preferred route and has released an Environmental Assessment (EA) for the proposed route. I am a year-round resident of Six Mile Lake and the proposed route will pass through my property and due to the presence of sulfide-bearing rock may have long-term negative impacts on water quality, health issues, and my property value. Other neighbors on the lake, while expressing their desire to see the road safety improved, share similar concerns.

For our official comments on the project, we are asking MNDOT to do the following to make sure the environment is not damaged by this road project:

- Follow the recommendations presented by Golder and Associates in their report to MNDOT, which recommends extensive sampling and geochemical testing prior to construction. If significant quantities of sulfide-bearing rock are confirmed, we urge MNDOT to pursue an alternate route. We request that language to this effect be added to the EA. 1
- Follow the guidelines established by Tennessee and Pennsylvania for road projects that encounter high sulfide rock and potential acid rock drainage (ARD). Again, we request that language to this effect be added to the EA. 2
- Update the MNDOT Environmental Assessment to include language requiring MNDOT to sample and test sulfide bearing rock prior to construction, with oversight from the Minnesota DNR and Minnesota PCA.
- Update the MNDOT Environmental Assessment to include language requiring MNDOT to thoroughly mitigate any exposure of sulfide-bearing rock according to best practices established by Tennessee and Pennsylvania, with oversight from the Minnesota DNR and Minnesota PCA.
- And lastly, a question. How does MNDOT, and in turn the State of Minnesota, intend to protect property owners, both legally and financially, should the construction process lead to environmental issues with long-term negative impacts on water quality, health issues, and property value? 3

We have received verbal assurances from MNDOT representatives that this project will not cause ARD, but as the EA is currently written, MNDOT does not state explicitly what their procedures will be, nor is there any language that absolutely requires MNDOT to follow established protocols. In addition, there is no explicit oversight role assigned to the DNR or the PCA. As property owners around Six Mile Lake, we will all be adversely effected by any ARD that is caused by this project, and as taxpayers we deserve written assurances that no environmental damage will be caused by the construction process.

Best Regards,

Terry Anderson
4339 Six Mile Lake Road

Additional Signers

Response 1 - The Golder Associates 2011 report to MnDOT was prepared following their review of the first NRRI report that summarized NRRI's initial visual estimates of sulfur content in rock outcrops along the west realignment corridor. Golder did not recommend 'extensive sampling and geochemical testing', but did recommend that additional steps were needed to assess the rock in the project area. MnDOT followed Dr. Verburg's 2011 recommendation for 'next steps' by performing additional rock sampling and laboratory testing to further assess the potential for ARD. Based on the results of this additional work, Dr. Verburg has concluded that the Highway 169 project can be classified as a low risk, as summarized in the March and May 2015 memoranda included in Appendix E2 of the Findings of Fact and Conclusions document.

Response 2 - Decisions regarding the approach/need for the suggestions made in this comment are being addressed through the work of the Technical Work Group (TWG) recently initiated to begin the post-NEPA process described in the EA/EAW Section V.A.10.a – Recommendations (pages 61-62 of the

EA/EAW). The TWG includes staff from the agencies recommended in this comment – i.e., MnDNR and MPCA– as well as staff from MDH, USEPA, MnDOT, FHWA, and ARD technical expert Dr. Verburg from Golder Associates.

Response 3 - Property owners – and the environment – are protected by the mitigation measures and other commitments described in the EA/EAW and project oversight by federal and state environmental agencies as part of the permitting processes (e.g., Section 404, DNR Public Waters, NPDES, etc.) for the project. MnDOT will continue to work with the MnDNR and MPCA, the state agencies that regulate water resources and water quality, during project development and permitting to address the potential for ARD and define best management practices to avoid/minimize environmental impacts from the project. In the unlikely event that unanticipated negative impacts do occur following construction, MnDOT would re-initiate coordination with the permitting agencies and technical experts as necessary to address the situation.

Terry Anderson Comments and 27 co-signers (page 2 of 2)

Susan Bonne Anderson
Six Mile Lake Property Owner

Gary & Beth Adams
David Adams
Six Mile Lake Property Owners

Michael & Tanya Altimari
Six Mile Lake Property Owners

Ralph & Theresa Kloehn
Six Mile Lake Property Owners

Mark Bofenkamp
David Kuntz
Christopher Olson
Six Mile Lake Property Owners

Will & Katherine Kemnitz
Six Mile Lake Property Owners

Sarah Stonich & Jon Ware
Six Mile Lake Property Owners

Matt & Susan Oberhelman
Six Mile Lake Property Owners

Todd Wachendorf & Jessica Dickau
Brian Wachendorf & Rachel Wachendorf
Six Mile Lake Property Owners

Dan & Kellie Rice
Needle Boy Lake Property Owners

Randy & Marie Giesen
Needle Boy Lake Property Owners

Denne Wesolowski
Six Mile Lake Property Owner

Scott & Melanie Ritterling
Six Mile Lake Property Owner

Jim Barott Comments (page 1 of 1)

----- Message from Jim Barott <barott@gmail.com> on Wed, 28 Jan 2015 20:31:53 -0600 -----

To: "Kainbach, Michael K (DOT)"

<michael.kainbach@state.mn.us>

Subject: Hwy 169 Eagles Nest Lake Area project- public comment

I have been a resident of Ely for four years and have driven Hwy 169 between Ely and Virginia many times, although not every day. In the local newspapers I have read the concern that the road gets shaded and icy during the winter from the road being on the north side of a ridge. However, it seems to me that a significant amount of shading is caused by the trees on the south side of the road and especially conifers such as balsam fir and spruce. If it is truly a safety issue, then I believe that an effort should be made to cut balsam fir and spruce on the south side of the road on both the newly constructed road and the stretch of highway that will not be reconstructed. Thank you.

1

Jim Barott
1103 E. Washington St.
Ely, MN 55731
218-760-0535

Response 1 - Additional tree clearing (which will help to minimize shading of the roadway) will occur as part of the proposed project to provide adequate clear zones along both sides of the highway. Furthermore, MnDOT has a work plan for where clearing vegetation along state highways will occur. Additional clearing along Highway 1/169 between the cities of Virginia and Winston is anticipated and will occur as scheduled in the work plan.

Chuck and Jacque Glass Comments (page 1 of 1)

--- Message from Jacqueline Glass <jacquerglass5@gmail.com> on Mon, 22 Dec 2014 23:33:46 -0600 ---
"Kainbach, Michael K (DOT)"
To: <michael.kainbach@state.mn.us>
Subject: Rte. 169 Fix

Hi Michael -

We live on Deer Haven Drive -- that really sharp corner on the west end of Clear Lake. We've owned a home there for 14 years. We had 3 or 4 accidents on that corner, people just missing the corner, taking out our mailbox each time in the first couple years, so now we have a post office box in Ely. We've seen bad accidents on that corner. One of the more startling was a man headed west who fell asleep on a bright sunny afternoon. He clipped the trees on the east side of the turn into Deer Haven, rolled the SUV and landed upside down in the ditch on the west side of the turnoff. Fortunately, he had on a seat belt and wasn't hurt badly, but his car was totaled. One friend's niece, many years ago, had an accident on our corner that left her with brain trauma. The very next corner past that is where the truck and trailer went over the side last summer. Another time, we heard a thud in the middle of the night and learned the next day from our neighbor that somebody had missed our curve headed west at 2:30 am. His vehicle was in the middle of the road headed east by the time the neighbor got there. None of the detailed accidents I've noted here were the ones that took out our mailboxes. So we've seen more than our share on this corner.

We just saw the piece on WDIO. From the map, it looks like those two particularly dangerous corners are not going to be straightened out. Many of the curves in that 5 or 6 mile stretch, starting at the east end of Clear Lake, are horrible at best. In spite of how awful the other curves are, the one where Deer Haven Drive cuts off and the next curve to the west, before you get to Mud Creek Road, are the most dangerous and treacherous. I'm hoping that we read the map wrong and that you will straighten out those two curves. All the road is bad, but those two are the worst!

Please email me back and let me know if those two dangerous curves will be straightened. More turn lanes and passing zones are nice, but if you don't deal with the root problem of this stretch, it won't matter how pretty and nice it is if people continue to wipe out on those two corners. We aren't too involved in this, thinking bureaucracy will prevail in the end, but when WDIO posted your email, I thought I'd throw in our two cents. Thanks!

Jacque Glass

Chuck and Jacque Glass
jacquerglass5@gmail.com
Cell - 763-458-5964 (Chuck)
Cell - 763-458-5965 (Jacque)

Response 1 - The Preferred Alternative includes some straightening to the referenced curve near the Deer Haven Drive intersection. In addition highway shoulders will be widened from two feet to eight feet and the ditch grades will be improved. The net result will be a safer highway design for road users.

Steve Piragis Comments (page 1 of 1)

----- Message from Steve Piragis <steve@piragis.com> on Fri, 30 Jan 2015 14:43:34 -0600 -----
To: "Kalnbach, Michael K (DOT)"
<michael.kalnbach@state.mn.us>
Subject: Highway 169 Comments

Regarding Hwy 1/Hwy 169 Eagles Nest Lake Area Project

I am aware that MNDOT has chosen a recommended route for the 169 project in the Eagles Nest area. This route passes through an area of known high-sulfide rock and I would like MNDOT to be aware of my concerns in this regard. I am asking MNDOT to do the following to make sure the environment is not damaged by this road project:

- Follow the recommendations presented by Golder and Associates in their report to MNDOT, which recommends extensive sampling and geochemical testing prior to construction. If significant quantities of sulfide-bearing rock are confirmed, we urge MNDOT to pursue an alternate route. 1
- Follow the guidelines established by Tennessee and Pennsylvania for road projects that encounter high sulfide rock and potential acid rock drainage.
- Update the MNDOT Environmental Assessment to include language requiring MNDOT to sample and test sulfide bearing rock prior to construction, with oversight from the Minnesota DNR and Minnesota PCA. 2
- Update the MNDOT Environmental Assessment to include language requiring MNDOT to thoroughly mitigate any exposure of sulfide-bearing rock according to best practices established by Tennessee and Pennsylvania, with oversight from the Minnesota DNR and Minnesota PCA.

My business requires good access to Ely and there is no doubt that this section of RTE. 169 is inadequate at present. I also appreciate the impacts of opening up sulfide bearing rock. Issues in Pa. outside College Station were and are exemplary. Please consider this input as you make final decisions.

Steve Piragis

Ely, Mn

Steve Piragis
Piragis Northwoods Company
105 N. Central Ave
Ely, Mn 55731

1 800 223-6565
1 218 365-6745
1 218 343-3294 mobile
steve@piragis.com
www.piragis.com

Padding Wilderness Waters Since 1979

Response 1 - The Golder Associates 2011 report to MnDOT was prepared following their review of the first NRRRI report that summarized NRRRI's initial visual estimates of sulfur content in rock outcrops along the west realignment corridor. Golder did not recommend 'extensive sampling and geochemical testing', but did recommend that additional steps were needed to assess the rock in the project area. MnDOT followed Dr. Verburg's 2011 recommendation for 'next steps' by performing additional rock sampling and laboratory testing to further assess the potential for ARD. Based on the results of this additional work, Dr. Verburg has concluded that the Highway 169 project can be classified as a low risk, as summarized in the March and May 2015 memoranda included in Appendix E2 of the Findings of Fact and Conclusions document.

Response 2 - Decisions regarding the approach/need for the suggestions made in this comment are being addressed through the work of the Technical Work Group (TWG) recently initiated to begin the post-NEPA process described in the EA/EAW Section V.A.10.a – Recommendations (pages 61-62 of the EA/EAW). The TWG includes staff from the agencies recommended in this comment – i.e., MnDNR and MPCA– as well as staff from MDH, USEPA, MnDOT, FHWA, and ARD technical expert Dr. Verburg from Golder Associates.

Barbara J. Folz Comments (page 1 of 1)

----- Message from "barbara.folz@wellsfargoadvisors.com" <barbara.folz@wellsfargoadvisors.com> on Tue, 27 Jan 2015 16:14:55 -0600 -----
"Kalnbach, Michael K (DOT)"
To: <michael.kalnbach@state.mn.us>
Subject: Highway 169

I am an Ely native who now lives in Minneapolis. I refuse to drive 169 late in the day when it starts getting dark. It is a hazard with all of the curves and black ice. Also, if you get behind a slow vehicle, it is torture. It would be nice to have bypass lanes like they have when you drive to the Brainerd area. That way, those that choose to go slow can move over to the right and let the others pass them without feeling the pressure of a long line behind them. Also, people pass when they shouldn't and put themselves and others in danger. Straightening this road is long overdue.

Thanks for listening.

Barbara J. Folz
Practice Administration Manager
Click Here To Visit Our Website
The Parr McKnight Wealth Management Group
of Wells Fargo Advisors, LLC
IDS Center
80 South 8th Street Suite #3400
Minneapolis, MN 55402
Office: 612-340-4512
Toll Free: 1-800-331-4923
Fax: 612-332-4071
barbara.folz@wfadvisors.com

Response 1 - The Preferred Alternative includes provision for 22,700 feet of passing opportunities along the 5.7 mile project length. A passing opportunity is defined as segments of highway where legal passing zones will be provided. Passing lanes, which are additional traffic lanes provided to accommodate passing vehicles, are not part of the Preferred Alternative. Passing lanes were not included because of the impacts associated with the extra road width required to accommodate the additional lanes.

Dayna and Eric Mase Comments (page 1 of 2)

January 30, 2015

Fr: Dayna & Eric Mase
PO Box 746, Ely, MN 55731

To: Michael Kalnbach, P.E.
Minnesota Department of Transportation, District 1 – Duluth
1123 Mesabi Avenue, Duluth, MN 55811

Dear Michael,

I am writing on behalf of myself and my husband, in regards to the Trunk Highway 1/169 Improvement Project (Eagles Nest/Six Mile Lake Area). We are anxious to have the 169 road upgraded to improve safety for all citizens, but are against the chosen southern/hybrid route.

As you know, the current status of this project is that MNDOT has recommended the southern route as the preferred route and has released an Environmental Assessment (EA) for the proposed route. As property owners & residents of Six Mile Lake, we have great concerns as to the potential short and long term negative impacts the current route will have on water quality, potential health issues and our property values due to the presence of sulfide bearing rock.

In a letter dated September 5, 2014, a group of Six Mile Lake property owners sent a letter to your agency and others, requesting that the following be done before a final route selection was made. We do not know if these requests happened, but are requesting them again.

- Baseline study of all water wells
- Baseline study of lake water
- Reconnaissance drilling of core samples with complete geochemistry for “cut areas” in the area called ‘South Route’.

We are also requesting that MNDOT do the following, to ensure that the environment is not damaged by this road project:

- Follow the recommendations presented by Golder and Associates in their report to MNDOT, which recommends extensive sampling and geochemical testing prior to construction. If significant quantities of sulfide-bearing rock are confirmed, we urge MNDOT to pursue an alternate route. We request that language to this effect be added to the EA.
- Follow the guidelines established by Tennessee and Pennsylvania for road projects that encounter high sulfide rock and potential acid rock drainage (ARD). Again, we request that language to this effect be added to the EA.
- Update the MNDOT Environmental Assessment to include language requiring MNDOT to sample and test sulfide bearing rock prior to construction, with oversight from the Minnesota DNR and Minnesota PCA.

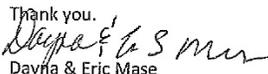
Response 1 - Baseline well data has been provided by the Minnesota Department of Health that indicates no significant amount of mobilized arsenic in the water samples collected. Appendix D of the EA/EAW provides baseline surface water samples including pH and total sulfate that have been collected in the project area. MnDOT proposes to continue regular sampling at these locations through construction of the project.

The process (described in Section V.A.10.a.-Recommendations of the EA/EAW) for working through the issues related to ARD will address whether the monitoring and/or drilling requested in this comment are needed. The recently-formed Technical Work Group (which includes staff from MnDNR, MPCA, MDH, USEPA, MnDOT and FHWA, as well as MnDOT’s ARD technical expert Dr. Verburg) will be providing input to MnDOT during this process.

Response 2 - The Golder Associates 2011 report to MnDOT was prepared following their review of the first NRRI report that summarized NRRI's initial visual estimates of sulfur content in rock outcrops along the west realignment corridor. Golder did not recommend 'extensive sampling and geochemical testing', but did recommend that additional steps were needed to assess the rock in the project area. MnDOT followed Dr. Verburg's 2011 recommendation for 'next steps' by performing additional rock sampling and laboratory testing to further assess the potential for ARD. Based on the results of this additional work, Dr. Verburg has concluded that the Highway 169 project can be classified as a low risk, as summarized in the March and May 2015 memoranda included in Appendix E2 of the Findings of Fact and Conclusions document.

Response 3 - Decisions regarding the approach/need for the suggestions made in this comment are being addressed through the work of the Technical Work Group (TWG) recently initiated to begin the post-NEPA process described in the EA/EAW Section V.A.10.a – Recommendations (pages 61-62 of the EA/EAW). The TWG includes staff from the agencies recommended in this comment – i.e., MnDNR and MPCA– as well as staff from MDH, USEPA, MnDOT, FHWA, and ARD technical expert Dr. Verburg from Golder Associates.

Dayna and Eric Mase Comments (page 2 of 2)

<ul style="list-style-type: none">• Update the MNDOT Environmental Assessment to include language requiring MNDOT to thoroughly mitigate any exposure of sulfide-bearing rock according to best practices established by Tennessee and Pennsylvania, with oversight from the Minnesota DNR and Minnesota PCA.	3
<p>We have received verbal assurances from MNDOT representatives that this project will not cause ARD, but as the EA is currently written, MNDOT does not state explicitly what their procedures will be, nor is there any language that absolutely requires MNDOT to follow established protocols. In addition, there is no explicit oversight role assigned to the DNR or the PCA. As property owners of Six Mile Lake, we will be adversely effected by any ARD that is caused by this project, and as taxpayers we deserve written assurances that no environmental damage will be caused by the construction process.</p>	4
<p>We would also suggest that when the construction phase of this project begins in 2017, that you begin the project at the farthest end from Six Mile Lake, and work your way towards this area. If you are planning on waiting till the project starts to determine if there are high sulfides in the Six Mile area, more delays will occur and more accidents will happen on a road that is in desperate need of repair. We do not want to wait another 10 years for a road upgrade, while MNDOT figures out how to mitigate a larger problem. Please do the job you are required to do: extensive sampling and geochemical testing prior to construction. And if what the Golder report has indicated is true, select a different route.</p>	5
<p>Thank you.  Dayna & Eric Mase 4332 Sixmile Road Ely, MN 55731</p>	

Response 3 – see previous page.

Response 4 - A Public Waters Permit will be required from the MnDNR and an NPDES permit will be required from the MPCA. MndOT will continue to coordinate with these agencies during final design and permitting (including as part of their participation in the TWG noted in the previous response) to address potential ARD issues.

Response 5 - As described in Section V.A.10.a of the EA/EAW and in the updated text from this section in Appendix E3 of this Findings document, MndOT will not be 'waiting until the project starts to determine if there are high sulfides in the Six Mile Lake area.' MndOT has initiated discussions with the Technical Working Group (TWG) described in Response 1 above and Section 3.2.7 of the Findings document.

Steven Lotz Comments (page 1 of 2)

1-30-2015
Steven Lotz
9388 Holter Road
Tower, MN 55790

Michael Kalnbach, P.E.
MN DOT District 1

Re: Highways 1 & 169 Eagles Nest segment

Please consider the following in regard to the EA/EAW for the Highways 1 & 169 Eagles Nest segment.

The only significant advantage of the preferred alternative 3A over alternative 1 is the greater “mobility” opportunity. However this is a somewhat misleading consideration. In the winter when traffic is light if the driving surface is good it is relatively easy to pass slower traffic, both because it does not involve a large group to be passed and because there is relatively little opposing traffic. In the summer when traffic is heavy there is often a string of traffic choosing not to pass (it would seem that driving on two lane roads is becoming a lost skill for more of the motoring public each year) and considerable opposing traffic and the addition of a couple long passing opportunities in the middle of the 20 mile stretch between Soudan and Ely means that one will be following a different group of vehicles into Ely. Further, while there is some traffic traveling well below the speed limit the passing would seem to be done mostly by those preferring to travel at a speed well above the posted limit.

The wetland impacts are only slightly higher with 1 than 3A while the forest impacts are roughly 50% greater with 3A than 1.

The amount of rock excavation is more than 2.3 times greater with 3A than 1. While Appendix A chooses to exclude rock excavation and the associated potential of acid-producing rock from consideration because it can be “avoided, minimized, and mitigated” (page 21) this must be taken as a self-serving choice, as it fails to consider that there are costs associated with avoiding, minimizing, and mitigating; to be measured both in dollars and in time. While the limited survey of sulfide bearing rock along the alternative routes suggests some variability, more than doubling the amount of rock excavated must be taken as greatly increasing the likelihood of encountering significant acid-producing rock and incurring cost associated with its avoidance, minimization and mitigation.

1

A consideration shown in table 1 – “level 2 alternatives evaluation matrix” that is not shown in table 3 – “level 3 alternatives: differentiating factors” is the amount of earthwork cut and fill material for the different alternatives. Table 1 does not include figures for alternative 3A but in looking at the figures for alternative 3 the table shows more than one and one-quarter million cubic yards of fill required, more than one half million more cubic yards than for alternative 1. One might assume that most of this

2

Response 1 - Section 3.2.8 of the Findings of Fact and Conclusions document provides updated rock excavation volume estimates. Alternative 3A is currently estimated to have 1.6 times the rock excavation volume of Alternative 1. As described in the technical memorandum in Appendix A, referenced in this comment, rock volume was not a “key differentiating factor” in the evaluation of alternatives that led to selection of Alternative 3A as the preferred alternative. The greater volume of rock excavation associated with the Preferred Alternative is accounted for in terms of estimated costs for excavation and mitigation. In addition to costs, the relative transportation benefits of the alternatives was a factor in the decision-making process. As noted in Response 3 below, the overall transportation benefits were greater for Alternative 3A than for Alternative 1.

Response 2 – The commenter is correct that level 2 screening presented in Table 1 indicated a larger volume of fill for Alternative 3 compared to the other options. Alternative 3A was not included in Table 1 because it was not introduced as an alternative until after, and as a direct result of, the level 2 analysis. The cut and fill values for Alternative 3A (comparable to the entries in Table 1) are: Bedrock Excavation = 227,000 CY; Earthwork Excavation = 226,000 CY; and Total Earthwork Fill = 976,000 CY. Therefore, the estimated amount of imported fill needed for Alternative 3A would be: $976,000 - 227,000 - 226,000 = 523,000$ CY. The values for Alternative 1 from Table 1 are: Bedrock Excavation = 145,000 CY; Earthwork Excavation = 202,000 CY; and Total Earthwork Fill = 670,000 CY. Therefore, the estimated amount of imported fill needed for Alternative 1 would be: $670,000 - 145,000 - 202,000 = 323,000$ CY.

Steven Lotz Comments (page 2 of 2)

required fill is for the east portion eliminated in 3A due to the amount of impacted wetlands in that segment but that may or may not be the case given that 3A still has to transition from the high ground to the low ground in the area west of the Bear Head Lake State Park Road. That may require a considerable amount of fill also and that fill must come from somewhere and there would be impacts associated with it. In order to more properly evaluate the alternatives 3A should have been included in the table 1 matrix or similar information for 3A should have been provided elsewhere.

2

Cost is given little consideration, which is perhaps appropriate given that this is an environmental assessment however given that the overall purpose and need is to make Highway 169 a safer road, cost must be considered. Rather than looking at the estimated cost of various routes it may be helpful to look at the total length of roadway that can be upgraded for a given amount of money using different routes because that should be the goal – to upgrade as much bad road as possible rather than to upgrade a given amount of roadway in the most grandiose fashion possible. This is not to say that the Eagles Nest segment should not be addressed. It is to be upgraded. Rather it is the route that is in question. What else can be fixed, what curves softened, what vertical alignment adjusted, what shoulders widened elsewhere by taking a less costly route such as alternative 1 in this segment. Given the purpose and need cost must be a consideration and alternative 1 may better meet that.

3

Steven Lotz

Response 2 – see previous page.

Response 3 - Cost was a consideration in the evaluation /selection of alternatives in the EA/EAW and, although Alternative 3A was not the least expensive alternative, it was also not the ‘most grandiose,’ either. Alternative 3, which was eliminated in Level 3 screening (see Section III of the EA/EAW), was the most expensive alternative considered – and Alternative 3A was developed during Level 2 alternatives evaluation as an option with more moderate costs and environmental impacts than Alternative 3.

Project costs have been updated since publication of the EA/EAW, and Alternative 3 would still be the most expensive (\$21.2 million). Among the three alternatives evaluated in detail in the EA/EAW, Alternatives 2A and 3A do not differ substantially in estimated costs (\$20.1 million and \$20.4 million, respectively), and Alternative 1 (\$19.1 million) is approximately 6-percent less than Alternative 3A.

Although total project cost is an important factor in assessing the various alternatives, the ability of the alternatives to meet the project needs is also taken into account. Alternative 3A has been determined to be the best alternative for addressing the primary purpose and need factors, primarily related to providing substantially greater length of passing opportunities than the lowest cost option, Alternative 1. Therefore, the preferred alternative represents a moderate cost (and social, economic and environmental impacts) alternative that also best meets the transportation objectives for the project.

Dale Anderson Comments (page 1 of 1)

HWY 1/169 Improvements Eagles Nest Lake Project

01-21-15 Public Hearing/Open House

COMMENTS & FEEDBACK

*NAME: Dale Anderson
*BUSINESS NAME (if Applicable):
*PHONE: 218-365-1432
*EMAIL: conditt.2003@yahoo.com
*ADDRESS: 830 E. Conar St, Ely, MN 55731
(* Providing contact information is optional)

COMMENTS: I want to thank MnDOT and the 169 Task Force for their work on this project. I am thankful that the decision was made to put a shoulder on the Eastern part of the project that follows the existing roadway as well as the new alignment on the Western portion.

One other thing that could possibly be done to make it safer is to adjust some of the approaches by Robence Rd, Wildgate, Brodack Rd. etc so that they are straight across from each other instead of off set. This would make for safer intersections and keep turn lanes closer together.

Please fill out this comment form and leave in the comment box or with project staff tonight. Your feedback will be shared with project staff and included in the project record.

Find more information and sign up for email updates at the project website:
www.dot.state.mn.us/d1/projects/Hwy169eagles/index.html

Comments may also be mailed to Michael Kahlbach, MnDOT Project Manager, at: 1123 Mesabi Avenue, Duluth, MN 55811 or submitted via e-mail at michael.kahlbach@state.mn.us. Comments must be received by January 30, 2015.

Response 1 - The Preferred Alternative includes some improvements to intersections and driveways along the corridor. Additional improvements such as those suggested were considered, however due to relatively light traffic volumes and additional costs and impacts the additional modifications were not pursued.

Larry Anderson Comments (page 1 of 1)

HWY 1/169 Improvements Eagles Nest Lake Project

08-21-13 Public Hearing/Open House

COMMENTS & FEEDBACK

*NAME: Larry Anderson
*BUSINESS NAME (if Applicable): _____
*PHONE: 218-365-3155
*EMAIL: larry@frontier.net
*ADDRESS: 1385 Peninsula Rd Eagle
(* Providing contact information is optional)

COMMENTS:
Better site line coming from the west Approaching Trygg
Road-

also coming west from Eagle turn up left onto onto Trygg Rd
Need left turn lane
Dangerous now

Please fill out this comment form and leave in the comment box or with project staff tonight. Your feedback will be shared with project staff and included in the project record.

Find more information and sign up for email updates at the project website:
www.dot.state.mn.us/d1/projects/Hwy169eagles/index.html

Comments may also be mailed to Michael Kahlbach, MnDOT Project Manager, at: 1123 Mesabi Avenue, Duluth, MN 55811 or submitted via e-mail at michael.kahlbach@state.mn.us. Comments must be received by January 30, 2015.

Response 1 - The Preferred Alternative does include realignment of Highway 1/169 both west and east of Trygg Road to improve sight lines as well as improving the vertical profile (reducing the rolling nature of the existing roadway). In addition, a right turn lane will be provided at Trygg Road for eastbound traffic and a bypass lane for westbound traffic.

Evelyn Anderson Comments (page 1 of 1)

To:
Michael Kalnbach, P.E.
Mn Dept. of Transportation
MnDOT - District 1
1123 Mesaba Ave.
Duluth, MN 55811

Subject:
Highway 169 North - Eagles Nest Project - SP6904-46 -- Preferred Alternative 3A

Dear Mr. Kalnbach,

I am a resident of the Eagles Nest Township area and support the reconstruction of Highway 169 in the Eagles Nest Area between Tower and Ely.

MnDOT has announced the Preferred Alternative 3A for the project that looks to achieve the most Safety Improvements with the least amount of social, economic, environmental, and minimal detour impacts.

This Preferred Alternative 3A will benefit our local residents, our area school transportation, emergency services, local businesses, their suppliers, area employees, and the general motoring public with much needed Safety Improvements on this segment of highway.

I therefore support the Preferred Alternative 3A and urge completion of this project in a timely manner.

Sincerely,


Signature

Evelyn A. Anderson
Printed Name

1385 PENINSULA DR.
Address

ELY MN 55731
City, State, Zip

01-21-2015
Date

Please look @ turning lane onto TRYGG RD going
westward from Ely--
Cut down H.I. (sightline) from west @ Trygg Rd.

Response 1 - The Preferred Alternative does include realignment of Highway 1/169 both west and east of Trygg Road to improve sight lines as well as improving the vertical profile (reducing the rolling nature of the existing roadway). In addition, a right turn lane will be provided at Trygg Road for eastbound traffic and a bypass lane for westbound traffic.

William and Catherine Kemnitz Comments (page 1 of 1)



To: Bob Rogers/seh@SEH,
Cc:
Bcc:
Subject: Fw: comments
From: Bob Rogers/seh - Wednesday 03/04/2015 03:47 PM

----- Message from w k <wkemnitz@gmail.com> on Wed, 28 Jan 2015 01:47:18 +0000 -----
To: "Kalnbach, Michael K (DOT)"
<Michael.Kalnbach@state.mn.us>
Subject: Comments to Hwy 1/169 EA/EAW

Dear Mr. Kalnbach,

We are homeowners on Sixmile lake. Our comment consists of lending our support to the attached letter from Matt Oberhelman. The letter highlights several critical shortcomings to the environmental assessment which should be remedied by conducting an Environmental Impact Study (EIS). The EIS should provide for proper sampling and testing as well as a comprehensive mitigation plan should any sulfide issues arise. In addition, the DNR and MPCA should be given oversight of the project. | 1

We care about the safety of people driving on Highway 1/169 and support the effort to improve the road's safety. However, everyone's interests will be best served by basing any route choice and project plan on environmental "best methods practices." Only then can the cost evaluation be considered thorough and appropriate for such a large investment of tax payers' money. The route selection, especially if the most expensive option is chosen, should be based on the most solid scientific process and environmental work and any plan should provide adequate mitigation of its potential consequences. | 2

Mr. Oberhelman's letter exposes concerning issues that should be fully addressed before final decisions are made. The agencies involved are directly accountable for the environmental impact of the project.

Best regards,

William and Catherine Kemnitz

Response 1 - See responses to Mr. Oberhelman's letter.

Response 2 - Section III: Alternatives of the EA/EAW describes the environmental, cost and transportation benefits involved in the selection of the preferred alternative. Environmental impacts and mitigation (including best management practices) were taken into account in the alternatives decision-making process. Section V: Social, Economic and Environmental Impacts of the EA/EAW compares the impacts of three Build alternative options considered in Step 3 Screening (see page 29 of the EA/EAW) in detail, further supporting the selection of Alternative 3A as the preferred alternative.

Donald Pasanen Comments (page 1 of 1)

To:
Michael Kalnbach, P.E.
Min Dept. of Transportation
MnDOT - District 1
1123 Mesaba Ave.
Duluth, MN 55811

Subject:
Highway 169 North - Eagles Nest Project - SP6904-46 - Preferred Alternative 3A

Dear Mr. Kalnbach,

As a motorist who has travelled Highway 169 in the Eagles Nest Area between Tower Ely, I support the necessary reconstruction of this highway.

MnDOT has announced the Preferred Alternative 3A for the project that looks to achieve the most Safety Improvements with the least amount of social, economic, environmental, and minimal detour impacts.

This Preferred Alternative 3A will benefit our local residents, our area school transportation, emergency services, local businesses, their suppliers, area employees, and general motoring public with much needed Safety Improvements on this segment of highway.

I therefore support the Preferred Alternative 3A and urge completion of this project in a timely manner.

Sincerely,


Signature

Donald C. PASANEN
Printed Name

3611 Hwy 169
Address

Ely MINNESOTA 55731
City, State, Zip

12-20-15
Date

1 | MIKE: WE HAVE BEEN ON CLEAR LAKE FOR 57
YEARS. PLEASE DON'T INSTALL RUMBLE STRIPS NEAR
CLEAR LAKE. WE NEED A NEW SAFE ROAD WITHOUT
THE NOISE!! Thank you Donald C Pasanen

mgC.mail.yahoo.com/need?launch?rand=ekns8jvrd1tsu#822200198 Page 1 of 1

Response 1 - Public complaints about noise from rumble strips have primarily occurred in situations where centerline rumble strips have been installed on highways near residential areas. Installation of shoulder rumble strips has not resulted in similar complaints – and use of shoulder rumble strips is a component of MnDOT’s standard design to improve roadway safety.

For the Highway 1/169 project, use and/or design of centerline rumble strips will be assessed in the portions of the project near residences, to determine whether there would be a substantial safety benefit from installing centerline strips and to determine if an alternative design (e.g., a new, less noisy concept known as ‘mumble strips’) should be used.

Appendix B2 – Other Comments Received

City of Babbitt



Telephone 218-827-3464
Fax 218-827-2204
E-mail: cathy@babbitt-mn.com
Website: www.babbitt-mn.com

71 South Drive
Babbitt MN 55706

Mayor – Andrea Zupancich
Clerk-Treasurer – Cathy Bissonette

Councilor: Ron Marinaro
Jim Lassi
Travis Roseth
Terry Switajewski

January 22, 2015

Michael Kalnbach, P.E.
MN Dept. of Transportation
District 1 – Duluth
1123 Mesaba Ave.
Duluth, MN 55811

Dear Mr. Kalnbach:

On behalf of the Babbitt City Council, this letter shall serve as a letter of support for the MnDot Preferred Alternative 3A plan that has been initiated by the MN Department of Transportation concerning the proposed route on Highway 169 in the Eagles Nest Area. This is the safest alternative for our children, our citizens and our communities.

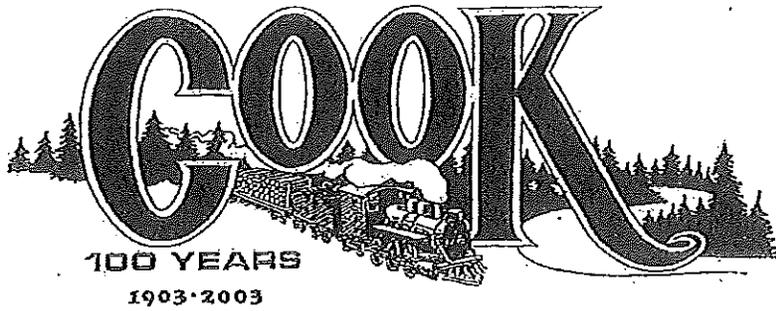
We understand this proposed plan will replace pavement, widen shoulders, expand clear zones, add turn and bypass lanes, offer passing opportunities and realign portions of Highway 169.

It is critical that a plan is adopted that will provide a safe route for those that travel to school, work, medical appointments, businesses or for recreational purposes.

Sincerely,

Cathy Bissonette
Clerk-Treasurer

*Babbitt – The Home of Taconite, the Heart of the Steel Industry
Future Home of Minnesota's Precious Metals*



January 29, 2015

Michael Kalnbach, P.E.
Mn Dept. of Transportation
1123 Mesaba Ave.
Duluth MN 55811

Mr. Kalnbach,

Regarding MnDOT Project S.P. 6094-46, the City of Cook would like to be noted in support of Preferred Alternative 3A.

The proposed straightening, added turn and bypass lanes, and improved wider shoulders all will contribute to a much safer travel route to and from Ely. This Preferred Alternative 3A, will also be the least disruptive for local residents in Tower and Ely and also area businesses.

Thank you for your time and consideration of our opinion. The public employees of MnDOT such as yourself, do an excellent job of keeping Minnesota's roads and highways well maintained and safe for our residents and tourists.

Sincerely,

Theresa Martinson
Administrator-Clerk/Treasurer
City of Cook

Resolution# 2015-003
Adopted 01/20/2015

CITY OF ELY
RESOLUTION IN SUPPORT OF THE HWY 169 NORTH TASK FORCE
EAGLES NEST RECOMMENDATIONS

WHEREAS there have been countless accidents and at least nine documented fatalities on Hwy 169 between Tower and Ely with three in the Eagles Nest Lake Area in the past fifteen years.

WHEREAS in 2005, Congressman Jim Oberstar secured federal transportation funds through SAFE-TEA-LU to complete safety improvements on Highway 169 from Virginia to Winton.

WHEREAS the Highway 169 North Task Force has worked diligently with MnDOT to develop the preferred Alternative 3A, South Alignment.

WHEREAS the Highway 169 North Task Force has made recommendations to MnDOT for Highway Safety Improvements in the Eagles Nest Project Area of Highway 169, between Soudan and Ely.

WHEREAS the preferred Alternative 3A Hybrid Reconstruction Plan for the Eagles Nest Area achieves the most safety improvements with the least amount of social, economic, environmental and detour impact for the schools, businesses, local residents and visitors.

WHEREAS the elected officials in the City of Ely, Town of Morse and Ely School Board have been unanimous in the support of the Highway 169 North Task Force recommendations.

NOW, THEREFORE BE IT RESOLVED, that the City Council of the City of Ely, Minnesota, does hereby adopt this resolution in support of the preferred Alternative 3A Reconstruction Plan to improve safety for the communities residents and visitors and to reduce and/or eliminate the dangerous curve and black ice conditions currently present.

Upon vote taken thereon, the following voted:

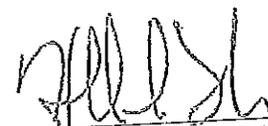
For: Council members A.Forsman, Kess, Debeltz, Omerza, Polyner, D.Forsman and Mayor Novak

Against: None

Whereupon said Resolution No. 2015-003 was declared duly passed and adopted this 20th day of January, 2015.



Chuck Novak, Mayor



Harold R Langowski, Clerk/Treasurer



Municipal Building
206 Kennedy Memorial Drive
Hoyt Lakes, Minnesota 55750-1140

www.hoytlakes.com
e-mail: info@hoytlakes.com

Phone: (218) 225-2344
FAX: (218) 225-2485

January 26, 2015

Mike Kalnbach, P.E.
Minnesota Department of Transportation
District 1-Duluth
1123 Mesaba Avenue
Duluth MN 55811

Dear Mr. Kalnbach:

Please consider this letter as public input from the City Council of the City Hoyt Lakes in support of MnDOT Preferred Alternate 3A for the Highway 169 Eagles Nest Project. We understand this will provide a safe route for those that travel to school, work, medical appointments, businesses, or are in the area for recreation. We believe that this is the safest alternative for children, citizens and the community.

Sincerely,

Mark Skelton
Mayor
City of Hoyt Lakes

c: Commissioner Tom Rukavina
City Council

----- Message from Linda Keith <linda@cityoftower.com> on Thu, 29 Jan 2015 17:03:05 -0600 -----

To: "Kalnbach, Michael K (DOT)"
<michael.kalnbach@state.mn.us>

Subject: City of Tower Resolution in support of Preferred Alternative 3A

Hi Mike

Please find a copy of the resolution the City of Tower passed in support of the Highway 169 Preferred Alternative 3A. Please include this in your public comments.

Thanks

Linda K Keith
City Clerk Treasurer
City of Tower
Population 500
218.753.4070 Phone
www.cityoftower.com



Resolution Number 2015-002

RESOLUTION IN SUPPORT OF TRUNK HIGHWAY 169 EAGLES NEST TASK FORCE
PREFERRED ROUTE

Whereas, in 2005, Congressman James Oberstar designated federal transportation funding to complete multiple safety improves on trunk highway 169 between Virginia and Winton; and

Whereas, there have been continual accidents whereby several accidents resulted in the loss of life; and

Whereas, the Highway 169 task force has spent countless hours working with the Minnesota Department of Transportation to establish the preferred Alternative 3A/South Alignment; and

Whereas, the preferred Alternative 3A provides the citizens of our community and surrounding communities the least economic, social, and environmental impacts; and

Whereas, the preferred Alternative 3A enables our emergency services team to respond the most efficiently and in the best interest of patient care; and

Whereas, the City Council of the City of Tower supports the Highway 169 Task Force and their recommendations; and

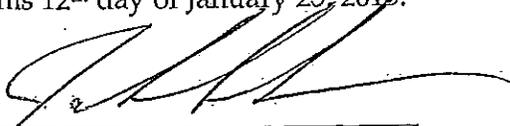
Now therefore be it resolved the City Council of the City of Tower, Minnesota does hereby adopt this resolution in support of the preferred Alternative 3A Reconstruction Plan to improve the safety of trunk highway 169 for our citizens and all those who will travel the road for years to come.

Upon vote taken thereon, the following voted:

Ayes: Broten, Carlson, Dougherty, Hiltunen, and Matich

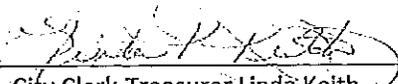
Nays: None

Whereupon said Resolution Number 2015-001 was declared duly passed and adopted this 12th day of January 25, 2015.



Mayor, Josh Carlson

Attest:



City Clerk-Treasurer Linda Keith

**City of Winton
PO Box 163
Winton, MN 55796**

January 16, 2015

Michael Kainbach, P.E.
MN Dept. of Transportation
MnDOT – District 1
1123 Mesaba Ave.
Duluth, MN 55811

RE: Preferred Alternative 3A, Highway 169

Dear Mr. Kainbach,

I am the City Clerk for the City of Winton, located along State Highway 169. Our residents rely on a safe route to and from the City of Winton. Many of our residents travel Highway 169 daily for work and medical needs. Our schools and businesses need safe transportation along this route.

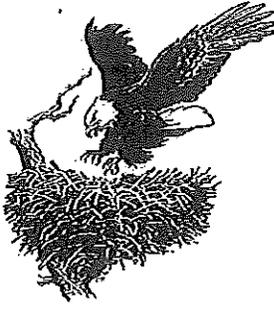
I am in support of the Preferred Alternative 3A reconstruction of Highway 169.

Thank you for your work to make this difficult area of the Highway as safe as possible.

Sincerely,



Anne Jackson
Winton City Clerk
PO Box 163
Winton, MN 55796



Township of Eagles Nest

1552 Bear Head State Park Rd., Ely, Minnesota 55731-8012

Michael Kalnbach
MN Department of Transportation
MnDOT District 1
1123 Mesaba Ave.
Duluth, MN 55811

Dear Mr. Kalnbach:

The Township of Eagles Nest has grave concerns about the safety of the water access to Robinson Lake on the edge of Highway 169 between mile posts 275 and 276. We are expressing this concern now, with the expectation that the problem will be dealt with in conjunction with the Eagles Nest Area Reconstruction Project – SP6904-46.

The highway skirts the lake in the vicinity of the boat landing and, though the landing is an official water access point, there is no place to maneuver boat trailers, much less park vehicles without impinging on the highway. People therefore park their vehicles on the shoulder, barely outside the fog line, or, too often, over the fog line.

This is a dangerous situation. Just at our last town meeting a citizen described having to maneuver past a vehicle parked there while being met with oncoming traffic, and while being followed by a school bus. It is only a matter of time before a terrible accident occurs, possibly maiming or killing people. Something must be done about it now.

We strongly urge you to work with the DNR to make that water access less dangerous. One possible solution is to relocate the access to the south end of the lake. Another is to relocate it slightly north of its current location, where there is more room between the lake and the highway. Still another is to abandon it altogether.

We realize there may be difficulties in dealing with wetlands or with invoking eminent domain; there is no easy solution. But, something must be done before someone gets killed.

Sincerely,

Richard P. Floyd
Chairman

----- Message from Mary Tome <marytome56@gmail.com> on Wed, 28 Jan 2015 11:43:19 -0600 -----

To: "Kainbach, Michael K (DOT)"
<michael.kainbach@state.mn.us>

Subject: SP 6904-46 - Preferred Alternative 3A

TOWN OF FALL LAKE
P.O. Box 599
Ely, Minnesota 55731

January 27, 2015

Michael Kainbach, P.E.
MN Dept. of Transportation
MnDOT – District 1
1123 Mesaba Av
Duluth, MN 55811

Re: SP 6904-46

Mr. Kainbach,

This letter is to inform you that the Fall Lake Board of Supervisors supports the Preferred Alternative 3A hybrid reconstruction plan for State Highway 169 in the Eagles Nest area.

This highway is a major connection for the residents of Fall Lake Township and the Iron Range and also serves as a primary route for the tourists that come to enjoy our area and it is imperative that this road be improved to provide for a safer route for all to use.

We believe that Preferred Alternative 3A achieves the most safety improvements with the least amount of social, economic and environmental impact. It also provides minimal detour impacts for schools, businesses, suppliers, area employees, residents and visitors.

Thank you for the opportunity to comment on this important project.

Mary Tome, Supervisor
Fall Lake Township, Lake County, MN

marytome56@gmail.com

falllake@frontiernet.net

Town of Morse

P.O. Box 660
Ely, Minnesota 55731

January 20, 2015

Michael Kalnbach, P.E. michael.kalnbach@state.mn.us
Mn Dept. of Transportation
MnDOT - District 1
1123 Mesaba Ave.
Duluth, MN 55811

Dear Mr. Kalnbach:

The Town of Morse Board of Supervisors would like to provide comment on the **Highway 169 - Eagles Nest Area Reconstruction Project - SP 6904-46 - Preferred Alternative 3A**

The Morse Board has reviewed the project and believes the Preferred Alternative 3A would best serve the residents of the Town of Morse. At our January 19, 2015 meeting the following resolution was passed unanimously by the board:

Whereas, the Highway 169 project has been endorsed by the Town of Morse Board of Supervisors for many years;

Whereas, the MnDOT plan to improve the Eagles Nest Area is a high priority for those who travel to and from the Town of Morse;

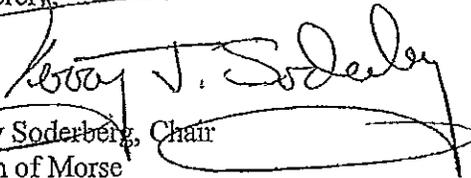
Whereas, MnDOT has selected Preferred Alternative 3A hybrid reconstruction plan for the Eagles Nest Area;

Whereas, the Town of Morse Board of Supervisors believes the greatest safety improvements can be realized by the Preferred Alternative 3A as proposed by MnDOT;

Therefore, the Town of Morse Board of Supervisors endorses Preferred Alternative 3A because of the safety benefits, the minimal negative impact due to detour impacts for schools, businesses, suppliers, area employees, local residents, visitors and the motoring public.

This resolution was passed by unanimous vote of the Town of Morse Board of Supervisors on January 19, 2016.

Sincerely,


Terry Soderberg, Chair
Town of Morse



Ely Chamber of Commerce & Visitor Center
1600 E. Sheridan St.
Ely, MN 55731
218-365-6123 800-777-7281

January 19, 2015

Michael Kalnbach, P.E.
MN Dept of Transportation – District 1-Duluth
1123 Mesaba Ave.
Duluth, MN 55811

Re: MnDot Preferred Alternate Route 3A

Dear Mr. Kalnbach,

The Ely Chamber of Commerce Board of Directors would like to express support of the process that resulted in the MnDOT Preferred Alternative 3A. We are pleased that this route addresses our concerns for safety of State Highway 169 which we referred to in our March 21, 2013 letter to District Engineer Duane Hill.

The proposed route will greatly improve the west end of Hwy 169, straightening deficient corners and banking them correctly as well as moving the highway away from the shaded areas that create black ice conditions. It also appears to be the least disruptive alternative to communities impacted by the project, with no major detours and minimal traffic delays during the construction so as not to adversely affect businesses, schools, suppliers, emergency services, tourists and residents.

We urge you to move forward with MnDot Preferred Alternate Route 3A.

Sincerely,

Ely Chamber of Commerce Board of Directors

Cherie Sonsalla, Executive Director
Ely Chamber of Commerce

102 E. Sheridan St.
Ely, MN 55731
(218) 365-3324

Ely Area Development Association

January 21, 2015

Michael Kalnbach, P.E.
Minnesota Department of Transportation
MnDOT - District One
1123 Mesaba Ave.
Duluth, MN 55811

Highway 169 North - Eagles Nest Project
SP6904-46 - Preferred Alternative 3A

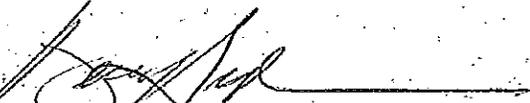
Dear Mr. Kalnbach:

I have lived in Ely since 2002 and have recorded hundreds of miles each year travelling between Ely and Duluth, the Twin Cities and other cities to the South. I serve as the Executive Director of the nonprofit organization, the Ely Area Development Association. Its mission is to promote economic development in Northeastern Minnesota.

That segment of Highway 169 in the Eagles Nest Area scheduled to be improved is one of the most dangerous segments of Highway one has to travel between Ely and other cities to the South. The number of accidents resulting in death or injury that have occurred since I have lived here is appalling. MnDOT's acceptance of the Preferred Alternative 3A Project with the safety improvements that it will bring, will help and support our organization in its mission to expand tourism and economic development in the Ely area.

Our organization endorses the selection of the Preferred Alternative 3A Project and urges the MnDOT to complete the project without delay.

Sincerely,



Gerald M. Tyler
Chairman/Executive Director

INDEPENDENT SCHOOL DISTRICT NO. 696
Ely Public Schools



DANIEL A. BETTIN
6-12 Principal

ALEXANDRA E. LEITGEB
Superintendent

ANNE M. OELKE
K-5 Principal/
Community Education Director

January 21, 2015

Michael Kalnback, PE
MN. Dept. of Transportation
District 1-Duluth
1123 Mesaba Ave.
Duluth, MN 55811

Dear Mr. Kalnback,

This letter is being sent from the Ely ISD #696 Board of Education in support of MnDOT Preferred Alternative 3A route. This will allow for the development of the safest route for our children when traveling in school buses.

Currently, if a bus breaks down while transporting students, the shoulders are not wide enough to allow for safe areas to pull off during a mechanical or weather related issue. We would suggest that the 8 foot paved shoulders, like the new Black Bear section, be installed with a shoulder-in slope. In lieu of that option, the shoulders planned at 6 foot paved and 2 foot gravel are safer than what is currently in place. Softening and banking correctly the horizontally and vertically deficient corners will significantly improve the safety of the highway for our children traveling on a school bus.

This route will also prevent major traffic delays and detours that would be costly both time wise and financially for the school district. We would like to avoid increasing time on buses for the students who already spend at least 30-45 minutes one way on the vehicle. The financial impact of other routes would be significant to our small, rural district.

As a result, we highly support the alternative 3A route because it appears to have the least social, economic, and environmental impacts with the least detour impacts.

Sincerely,

Alexis Leitgeb, Superintendent of Schools
Ely ISD #696 Board of Education

600 East Harvey Street, Ely, Minnesota 55731-1614

Phone: 218-365-6166 Fax: 218-365-6138

Raymond Marsnik, Chairman
Scott C. Kelleman, Clerk
Paul Pengal, Treasurer

EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

Amy Richter, Director
Rochelle Sjoberg, Director
Kathy Udovich, Director

----- Message from John klarich <jklarich@mib.k12.mn.us> on Mon, 19 Jan 2015 11:41:28 -0600 -----

To: "Kalnbach, Michael K (DOT)"
<michael.kalnbach@state.mn.us>

Dear Minnesota Department of Transportation:

I would like to recommend and encourage the Minnesota Department of Transportation to approve the M 3A MnDot Preferred Alternative route on Highway 169 in the Eagles Nest Area. As a School Superintendent of Mt. Iron-Buhl and Mesabi Academy, I feel that the upgrading of this route will help protect our students in inclement weather as well as good weather when travelling for academic, fine arts, or athletic events. This is a notorious area for dangerous road conditions, clogged traffic, dangerous curves, and poor shoulders. Our bus and suburban drivers often comment this the most dangerous run they have of all the routes we take.

Thank you for listening to my concerns and thinking of the children's safety.

John Klarich
Superintendent
ISD 712
Mt. Iron-Buhl
218-735-8271 ext 2101



Saint Louis County

Seventh District Commissioner • 1810 12th Avenue East, Room 214, Courthouse
Hibbing, MN 55746 • Phone: (218) 262-0201 • Fax: (218) 262-0203
Emails: raukars@stlouiscountymn.gov • Website: www.stlouiscountymn.gov

Steve Raukar
County Commissioner

January 26, 2015

Michael Kalnbach, P.E.
Minnesota Department of Transportation, District 1 -- Duluth
1123 Mesaba Avenue
Duluth, MN 55811

Re: Request for comment on the EA/EAW for the Mn/DOT Highway 1/169 Eagles Nest Area Project

Dear Mr. Kalnbach:

Thank you for the opportunity to comment on this important project. St. Louis County has been an active partner in the Highway 169 Task Force since its inception. Our mutual constituents have expressed concern about traffic safety along this stretch of T.H. 169 for many years and we are happy that the project is reaching the end stages of project development. St. Louis County has reviewed Alternative 3A that Mn/DOT is offering as the preferred route. We are pleased to inform you that the St. Louis County Board approves and supports Alternative 3A.

Please accept the attached St. Louis County Board Resolution No. 15-45 as St. Louis County's official support for the project alternative and have it included in the official public record.

Again, thank you for the opportunity to comment. Please call me at 218-262-0201 or Jim Foldesi, St. Louis County Public Works Director/Highway at 218-625-3840 if you have any questions or concerns.

Sincerely,

Steve Raukar
St. Louis County Commissioner
Chair Public Works & Transportation Committee

Attachment

cc: St Louis County Commissioners
St Louis County Administration
Jim Foldesi, SLC Public Works Director/Highway Engineer

"Working Together, Serving People"



Resolution
of the
Board of County Commissioners
St. Louis County, Minnesota
Adopted on: January 13, 2015 Resolution No. 15-45
Offered by Commissioner: Rukavina

Support for Highway 1/169 Eagles Nest Lake Area Project

WHEREAS, The Minnesota Department of Transportation (MnDOT) has proposed a new transportation infrastructure maintenance and safety improvement project on a corridor of state highway extending along 5.7 miles of Highway 1/169 from 0.1 mile west of Sixmile Road to approximately 0.1 mile east of Bradach Road, located in the 4th Commissioner District of St. Louis County; and

WHEREAS, The St. Louis County Board has expressed its concerns for safety issues on this stretch of roadway for many years, first passing a resolution of support for the Highway 169 North Improvement Task Force in 2000 (Resolution No. 00-415, dated June 13, 2000), and again in 2013 in a resolution supporting the continued efforts of the task force in recommending a realignment of the highway (Resolution No. 13-161, dated March 26, 2013);

THEREFORE, BE IT RESOLVED That the St. Louis County Board approves of and supports the Minnesota Department of Transportation's new infrastructure maintenance and safety improvement project along Highway 1/169 in the Eagles Nest Lake area of St. Louis County, Minnesota;

RESOLVED FURTHER, That County Board support for the new MnDOT transportation infrastructure maintenance and safety improvement project is with the expectation that normal negotiations between the county and MnDOT regarding roadway turn back issues and Mesabi Trail continuation efforts will be acknowledged as part of any realignment of Highway 1/169;

RESOLVED FURTHER, That the County Board directs that a letter of support for the project be submitted prior to close of the public comment period on January 30, 2015, to Michael Kalnbach, P.E., Minnesota Department of Transportation, District 1-Duluth, 1123 Mesaba Avenue, Duluth, MN.

Commissioner Rukavina moved the adoption of the Resolution and it was declared adopted upon the following vote:
Yeas – Commissioners Jewell, Boyle, Dahlberg, Rukavina, Nelson, Raukar and Chair Stauber - 7
Nays – None

STATE OF MINNESOTA
Office of County Auditor, ss.
County of St. Louis

I, DONALD DICKLICH, Auditor of the County of St. Louis, do hereby certify that I have compared the foregoing with the original resolution filed in my office on the 13th day of January, A.O. 2015, and that this is a true and correct copy.

WITNESS MY HAND AND SEAL OF OFFICE at Duluth, Minnesota, this 13th day of January, A.D., 2015.

DONALD DICKLICH, COUNTY AUDITOR

By

Deputy Auditor/Clerk of the County Board

January 13, 2015

Mr. Michael Kalnbach, P.E
MN Dept. of Transportation
1123 Mesaba Ave.
Duluth, MN 55811

Dear Mr. Kalnbach:

I am writing to express my opinion on the Highway 169 MnDOT Project S.P. 6904-46. I believe that the MnDOT Preferred Alternative 3A would provide the best safety improvements in the Eagles Nest area.

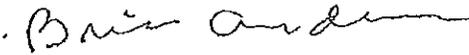
I am a lifelong resident in the Ely area and travel Highway 169 weekly. This is the worst stretch and it desperately needs to be made safe. I have been following all of the information that has been given to me from all of the Highway 169 Task Force meetings. I find it hard to believe that the worst stretch of road is the last to be fixed.

There is so much more traffic than there was years ago. The casino has increased usage of this road for employees and patrons. There are college students and many that travel in and out of Ely for work. Then there are retired people like me that travel out of Ely every week for medical appointments.

I urge you to do the right thing for those of us that travel on Highway 169. Let's fix it the right way and put public safety number one.

Thank you.

Sincerely,



Brian Anderson
P.O. Box 205/90 W. Chandler St
Ely, MN 55731
218-365-4676

January 28, 2015

Mr. Michael Kalbach, P.E.
MN Dept. of Transportation
MnDot – District 1
1123 Mesaba Ave.
Duluth, MN 55811

Dear Mr. Kalbach,

I'm writing in support of the Preferred Alternative 3A. I work for St. Louis County and traveled from Virginia to Ely on Highway 169 every Monday for over a year. There was one day that I left Ely at 3:30, and it was a wintery day with high winds. As I turned a huge curve by Clear Lake, I suddenly came upon a huge tree that had blown over and was blocking my side of the road. There were huge branches extending out, and I weighed my choices. I could go down a deep ravine, hit the tree head on and the branches would come through my windshield and probably kill me, or go around in the other lane. Lucky for me, there wasn't a car in the other lane, and I was able to make it safely.

I'm telling you my story because I don't believe you could ever repave and leave this road the way it currently is. I'm very sure that there are many stories like mine that you've never heard. There were also many close calls last winter with black ice, deer, and someone was actually in my lane as I came around a corner. The Eagles Nest area is a very bad stretch to travel on and it needs to be fixed so that public safety is number one.

Please fix Highway 169 as soon as possible so that we can travel safely to and from Ely. I have family there and travel it with my two year old daughter. I'm thankful that I no longer travel weekly for work this winter because I'm still haunted by the close calls I experienced while traveling on Highway 169 in 2014.

Sincerely,



Kristin Anderson
9334 Old Highway 169
Mt. Iron, MN 55768

January 13, 2015

Mr. Michael Kalnbach, P.E
MN Dept. of Transportation
1123 Mesaba Ave.
Duluth, MN 55811

Dear Mr. Kalnbach:

I am writing to express my opinion on the Highway 169 MnDOT Project S.P. 6904-46.

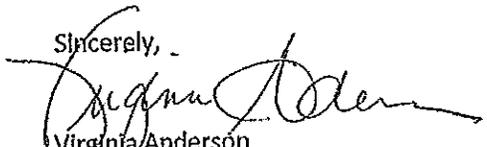
I believe that the MnDOT Preferred Alternative 3A would provide the best safety improvements in the Eagles Nest area. Please fix the worst stretch of road between Ely and Tower.

Public safety should be our number one concern and this route would improve the shading and black ice situation. This road needs to be straightened and widened so that there will be less accidents. It would be great to have turn and bypass lanes.

I urge you to do the right thing for those of us that travel on Highway 169. Let's fix it the right way and put public safety number one.

Thank you.

Sincerely,



Virginia Anderson
P.O. Box 205
Ely, MN 55731
218-365-4676

HWY 1/169 Improvements Eagles Nest Lake Project

01-21-15 Public Hearing/Open House

COMMENTS & FEEDBACK

*NAME: Tim Beaty

*BUSINESS NAME (If Applicable): _____

*PHONE _____

*EMAIL _____

*ADDRESS _____

(* Providing contact information is optional)

COMMENTS: IT'S ABOUT TIME !!!

Just returned after 25 yrs of running that
obstacle course every day

Please fill out this comment form and leave in the comment box or with project staff tonight. Your feedback will be shared with project staff and included in the project record.

Find more information and sign up for email updates at the project website:

www.dot.state.mn.us/d1/projects/Hwy169eagles/index.html

Comments may also be mailed to Michael Kahlbach, MnDOT Project Manager, at: 1123 Mesabi Avenue, Duluth, MN 55811 or submitted via e-mail at michael.kahlbach@state.mn.us. Comments must be received by January 30, 2015.

----- Message from Brian Carlson <Brian.Carlson@wsn.us.com> on Sat, 10 Jan 2015 17:16:34 -0600 -----

To: "Kainbach, Michael K (DOT)"
<michael.kainbach@state.mn.us>

Subject: Hwy 1/169 Eagles Nest Lake Project Comments

Dear Mr. Kainbach:

I am a property owner on St. Louis County Road 599 (Trygg Road) and am formally registering my comments about the proposed Highway 1/169 Eagles Nest Lake Area project.

I am in full support of MnDOT's recommended 3A Alternative for realignment of this highway. Although I am unable to attend the January 21, 2015 public hearing, I have reviewed the documents and route alternative diagrams on the project website and wish to register my support for this project as recommended by MnDOT.

Thank you for filing my comments.

Brian Carlson
Project Development
507-206-2130 | Direct
507-272-2797 | Cell

6301 Bandel Road NW Suite 301 | Rochester, MN 55901-8798
WidsethSmithNolfing.com
Engineering | Architecture | Surveying | Environmental

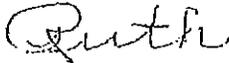
January 17, 2015
Michael Kainbach, P.E.
MN Dept. of Transportation -- District 1 -- Duluth
1123 Mesaba Avenue
Duluth, MN 55811

Dear Mr. Kainbach,

Congratulations on your project to try to fix one of the worst state highways in the State of Minnesota, Highway 169 in the Eagles Nest Area. MnDot Preferred Alternative 3A appears to be the safest alternative. Please pursue this project which will provide a safe route for all who travel this well used highway.

Thank you for your concerns and interest in this vital project.

Sincerely,



Ruth L Carlson
7514 Rocky Road
Crane Lake, MN 55725

----- Message from tony colarich <tcolarich@hotmail.com> on Tue, 30 Dec 2014 12:44:58 -0600 -----

To: "Kalnbach, Michael K (DOT)"

<michael.kalnbach@state.mn.us>

Subject: Highway 169 Eagles Nest 3A Alternative

Hello Mr. Kalnbach:

I'm supportive of the 3A Alternative for the Highway 169 Eagles Nest road project. I drove from my home in Ely to my employment at Minntac for 40 plus years. During this time I drove 1.4 million miles on Highway 169. The most unsafe portion of the drive was the Eagles Nest area. The curves and hills were problematic but the black ice issues were of great safety concern. On the way home from work I'd slow down at the Eagles Nest area and hug the center line to reduce the black ice danger. If you weren't on alert the black ice would cause you to lose traction and start to spin out.

It should have never taken this long to get the black ice safety issue addressed. If MNDOT really cared about road safety in Northern Minn. they would taken on this project long time ago instead of allowing in to be held hostage and used as a referendum against copper nickel mining.

Thank you.

Tony Colarich
1011 East White St.
Ely, Mn.

----- Message from Gregory A Dostert <gdusty@frontiernet.net> on Tue, 23 Dec 2014 09:00:24 -0600 -----

To: "Kalnbach, Michael K (DOT)"

<michael.kalnbach@state.mn.us>

cc: Polly McDonald <breitungclerk@frontier.com>

Subject: 169

Mike,

Thanks for the work, you and your staff put in this project. As a Town board supervisor for Breitung Township (eastern end of the project) and on behalf of our board and community we support your plan for the improvement of Highway 169, (3A). Thanks again Mike.

Gregory A Dostert
Supervisor
Township of Breitung

Bill Erzar
1232 Heather St.
Ely, MN 55731
218-365-3361 (home)
218-343-7448 (cell)
zar@frontiernet.net

Michael Kalnbach
Project Engineer
MnDOT District 1
1123 Mesaba Ave.
Duluth, MN 55811
Michael.kalnbach@state.mn.us

Subject: Highway 169 Eagles Nest Reconstruction Project (SP6904-46)
Preferred Alternative 3A and EA – Public Comment

Dear Mr. Kalnbach,

I support MnDOT's Preferred Alternative 3A and its EA for the Highway 169 Eagles Nest Project, and add the following comments:

I have been involved in this project from about 1997 and was elected as a Co-Chair of the official MnDOT Highway 169 North Task Force, along with Mr. Rudy Semeja as Co-Chair, at the onset of this Task Force in July of 2000. I and many others have been very involved with improving the Safety (our #1 priority) of this highway, acquiring funding, and seeing this project through to completion.

I worked at U.S. Steel's Minntac Plant in Mt. Iron for more than 3 decades and drove and car-pooled this road from Ely on a daily basis at about 116 miles a day from my house to the plant-site where I worked and back home. I've got a few miles under my belt and would consider myself an expert on this highway from Virginia to Winton to Highway 169's northern terminus at Garden Lake Bridge.

As a Task Force we identified three major issues between the junction of Highways 169 and 53 north of Virginia to Tower to Winton and two have been addressed with The Y-Store Intersection at Highways 1 and 169 dramatically improved and the Black Bear Wahlsten Rd to Flaim Road (SP 6936-17) project completed, as well as 33 left, right turn and bypass lanes added between Virginia and Tower as well as the lighting of 3 intersections with major County Roads. The Y-Store and Black Bear projects were our #1 and #3 priorities.

The #2 priority project, the Eagles Nest area continues to be pushed back and delayed.

Driving that road so much and having been one the of the first ones at and assisting at 3 fatalities, being at and assisting at many injury accidents, being in a 2-vehicle T-Bone crash, and several run off the road accidents, pulling people out of the ditch, etc., I have a pretty good understanding of the deficiencies in this roadway.

Specifically, between Ely and Soudan, the shading and black ice conditions, the 46 corners, the deficient back to back curves, bad roadway slopes and angling, poor sight lines and a lack of passing zones, inadequate unsafe and in some cases virtually no shoulders, no safe recovery or pull off areas, nearly non-existent safe clear zones, steep embankments, a shortage of turn and bypass lanes make this section of State Highway to be one of the worst ones in Minnesota, this is what Eagles Nest section is.

I am not happy with the continuous delays and procedures and unwillingness or reluctance of determining agencies personnel on the Federal level (EPA, COE, and FHWA) to meet with us on the project. Over the years, we continue to lose our buying power of the HPP funds acquired by Congressman Jim Oberstar in SAFETEA-LU in August of 2005 and accidents, injuries, and fatalities have continued. This project should have been completed about 2007.

This Task Force has had a good working relationship with MnDOT personnel over the years including Mike Robinson, John Bray, Denny Johnson, Brian Larson, Rob Ege, Mike Tardy, Dan Erickson, Chris Moates, Amr Jabr, Tom Jacobson, Kevin Adolfs, Tim Sheehy, Carl Dagen, and currently with Duane Hill, Michael Kalnbach, Jenny Ross, and Rob Ronning among others. Many of the afore mentioned have retired, some have passed on and I'm sure I've also left out a few.

We worked with Arrowhead Regional Development Commission (ARDC) and their staff John Chell, Andy Hubley, Vicki Spragg, and Pat Henderson. Andy facilitated all of our many meetings from which the Trunk Highway 169 North Improvement Plan booklet was developed. The mission statement adopted was Safety Improvement, Efficient Economic Corridor, and Aesthetically Pleasing Highway in that order.

Congressman Jim Oberstar and his staff Bill Richard, Peter Makowski, Kristina Handt, and Aaron Peterson were involved and dedicated to seeing this Safety Improvement Project through to completion. Mr. Oberstar will not have that chance.

We also worked with John Halverson of Sen. Norm Coleman's staff.

Our County Commissioner, Mike Forsman, has been involved from the beginning as well as other St. Louis County Board Members and now our current Commissioner, Tom Rukavina, who was a State Representative in the area at the time. Past and current legislators Rep. David Dill, Sen. Doug Johnson, Sen. Tom Bakk and the entire Iron Range Delegation Sen. David

Tomassoni, Sen. Tom Sauxhaug, Representatives Tony Sertich, Jason Metsa, Carly Melin, Tom Anzelc, Loren Solberg, and other NE Minnesota legislators have continually been supportive of this much needed Safety Improvement Project.

I and others have met with Minnesota Legislative Transportation Committee members over the years, Sen. Steve Murphy, Sen. Larry Pogemiller, Sen. Scott Dibble, Rep. Frank Hornstein, Rep. Erik Simonson and others.

Elwin Tinklenberg was commissioner back when we started on this endeavor, then Carol Molneau, and now current Commissioner Charlie Zelle and members of his staff, Directors Jon Chiglo and Michael Barnes. Commissioner Zelle, Congressman Rick Nolan and staff members Jeff Anderson, Jordan Metsa toured this segment of the highway with Task Force leadership and saw the obvious deficiencies pointed out and the necessary improvements needed.

Commissioner Zelle and Governor Dayton have a good understanding of the deficiencies and needs. Directors Chiglo and Barnes were very supportive of the Safety Improvements we are looking for here after their tour of the road.

U.S. Senator Amy Klobuchar has toured the highway with her staff, Gen. Tim Cossalter, and Jerry Fallos. She knows first-hand the issues having travelled this roadway as a youth with her folks to visit Grandma and Grandpa Klobuchar in Ely.

U.S. Senator Al Franken and staff Peter Makowski have addressed the issues on the route selection. Senator Franken's wife, Franni, has also travelled this highway and seen the issues we have identified.

The Minnesota Transportation Alliance and MoveMN are aware of the issues we are facing. Commissioner Mike Forsman and I have met with the group and Margaret Donahoe on a couple of occasions and our MoveMN member partners support our endeavors.

We have the support of our U.S. Senators and Congressman and our State Legislators as well as the cities of Ely, Winton, Babbitt, Townships of Morse, Fall Lake, Breitung, ISD 696, the Ely Chamber of Commerce, Ely Area Ambulance Service, Ely-Bloomenson Hospital board and staff, Morse-Fall Lake Fire Department, the St. Louis County Board of Commissioners, the Bois Forte Band, area Businesses and employees, area citizens, delivery truck drivers, school bus drivers, and others to get this road done.

As a note, back at the April 10, 2001 meeting in Duluth with MnDOT Staff, it was stated a fly-over of the area would be this Spring of 2001 and alignment mapping would be completed by the Fall of 2001.

Well, here we are 18 alignments later and hopefully getting some movement.

Issues have been addressed, meetings, pin-oaks, Indian burial grounds, historical artifacts, etc. The environmental issues have been studied, re-studied, and studied to death by MnDOT, UMD-NRRI, and consultations with Dr. Verburg of Golder Associates.

So, as Group and with MnDOT, we have looked at the Primary Objective of Safety Improvements, water and wetlands issues, rock and excavation, possible sulfides and mitigation issues and procedures, detour impacts to residents and economic impacts to businesses, travel time, mileage, social and property impacts, impacts to students on the daily bus for curricular and extra-curricular activities for area School Districts, and Vermilion Community College students as well.

But, at the same time, in a time frame of about 2 years, rock was blasted, removed, wetlands filled, and roads built right next door in the new Vermilion State Park. Obviously, it appears to not be under the same scrutiny as our segment of Highway 169.

The social environmental impact of the accident rate here in the Eagles Nest area, from MnDOT reports of August, 2010, show that 4.9 miles of Eagles Nest's project area accidents are 60% - 80% HIGHER than for similar roads in MnDOT District One!! This is an excessive rate! (A half mile section of the 5.4 miles of the Eagles Nest area is 30% lower).

But, as we look at those above issues and associated delays, people are still involved in accidents, people are still being injured, and fatalities have occurred over the past years. Friends of mine lose their daughter in an accident, the Mother of my kid's friend's dies, almost all the fatalities I have known, certainly many life-long injuries to friends and acquaintances have occurred and they continue to affect people each and every day. Those are costs you cannot put a dollar figure on! And their lives were changed forever!

During the week of January 12th, 2015, six (6) more accidents occurred in the Eagles Nest area that I am aware of. Three at MP 270.5 (swamp, black ice, shaded area) on 1-12-15 and another three at MP 274.4 (near Don Pasinen's) also on 1-12-15.

These others occurred outside the project area, one run-off road accident in Soudan near the Landfill Road and another off the road near Wolf Creek Pass at about MP 276.5 (Nemanich's Pit Rd).

These also were not in the project area, but, on Monday January 19th, there were 3 more run-off the road accidents at the Wolf Lake Public Access Rd, one at MP 277.0 and two at MP 277.1. One was a roll-over that totaled a 1999 Dodge pick-up truck (friend of mine hanging upside down by his seat belt, shook-up), one directly across the road from him, and another off the road at the access road.

While I believe it is necessary that we do study the environmental impacts in a timely manner, I believe MnDOT has done that with their staff, their contractors, and their consultants.

But, somewhere this process has become terribly flawed that these types of delays can keep continuing and do not take into account the social and physical impacts to individuals.

This project, when originally proposed and in the 2010-2013 Minnesota STIP included 2 miles of 3-lane passing areas and 10 foot wide shoulders. This original plan now has been

reduced to no 3-lane and only 8 foot shoulders. MnDOT's own St. Paul Office of Traffic Safety and Technology at one point had recommended the full 8 foot bituminous shoulders.

As a matter of comparison, Highway 169 from its northern terminus at Garden Lake Bridge to Winton to Ely to St. Louis County 88 Road 3 miles west of Ely was constructed through some big rock cuts with 10 foot wide bituminous shoulders 45 years ago in the 1969-70 time frame. No kidding...45 years ago!

The Task Force has supported the overall South Route alignment, but the Preferred Alternative 3A addresses most of the most critical areas, especially the shaded, black ice swamp area (MP 270.5) and the really bad corners at MP 271 and 272 and gets us up on the hill on the South Route at the West end of the project.

Much of the eastern part of the project will be upgraded considerably in the 3A plan and I and the Task Force believe it to be a good compromise, although my personal preference would have included the 8 foot bituminous shoulders. But, any more delays would be a travesty to this project, public funds, area residents, and the motoring public.

I believe MnDOT and other agencies have done an excessive amount of study of the environmental impacts and potential sulfide issues and more than adequately addressed mitigation procedures. They have also addressed the other factors involved and therefore I believe that the Preferred Alternative 3A route will achieve the most Safety Improvements with the least amount of environmental, social, and economic impacts with the least detour impacts for residents, schools, businesses and suppliers, employees, tourism, and motoring public.

Please accept these comments for supporting Preferred Alternative 3A and its EA.

Sincerely,

Bill Erzar
Citizen and Motorist
Highway 169 North Task Force Co-Chair

To:
Michael Kalnbach, P.E.
MN Dept. of Transportation
MnDOT-District 1
1123 Mesaba Ave.
Duluth, MN 55811

Subject:
Highway 169 North – Eagles Nest Project – SP6904-46 – Preferred Alternative 3A

Dear Mr. Kalnbach,

Being a person who has traveled this road for 31 years going to work daily at Minntac and also driven many loads of forest products up to 3 loads a day for another 4 years I know this road well. I have seen many cars in the ditch and also the semi truck in which claimed the driver's life. Anyone whom has traveled this road knows of all the black ice and slippery spots in the area which would be eliminated by the Route 3A. I am glad to see that the road near the Mud Creek area would be widened and corners would be softened. I was involved in an accident near Mud Creek where a person had passed out and was over the center line heading toward the fuel tank of my fully loaded semi truck, there was just enough room to swing the truck away from the oncoming truck and bringing it back to my lane while he slide down the side of my trailer and bounced off of the pickup truck behind me. Luckily no one was hurt and the patrolman stated I was very lucky because my tire tracks were on the edge of the shoulder near a high embankment.

The Preferred Alternative 3A would be a safer route for all by eliminating the low lying area and will have the least amount detours that would impact many who travel this road. I support the Preferred Alternative 3A and hope that it could be started as soon as possible.

Sincerely,

Dean J. Erzar
1280 S. White Iron Rd.
Ely, MN 55731
Jan. 28, 2015

----- Message from Tom Erzar <terzar@frontiernet.net> on Sat, 27 Dec 2014 11:14:11 -0600 -----

To: "Kalnbach, Michael K (DOT)"

<michael.kalnbach@state.mn.us>

Subject: Re: SP 6904-46 TH 1/169 Eagles Nest Announcement

Michael, thank you for the note, the following are my comments:

-I favor the route chosen as it satisfies both safety and environmental concerns. It also is within budget.

Tom Erzar

Sent from my iPad

Albert Forsman
641 E Camp St
Ely, MN 55731

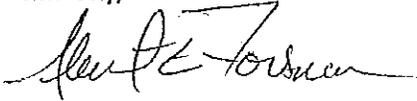
Michael Kalnbach, P.E.
MN Dept. of Transportation
MnDOT - District 1
1123 Mesaba Ave.
Duluth, MN 55811

Dear Sir:

As a resident of the City of Ely and a strong supporter of the Highway 169 North Task Force, I am writing in support of the Preferred Alternative 3A reconstruction plan for the Six Mile Lake - Eagles Nest Area of Highway 169. I firmly believe this plan is the safest and most economically and environmentally sound alternative.

This project has already taken excessively long to be completed. Please do all you can to see this project through without further delay.

Sincerely,

A handwritten signature in cursive script, appearing to read "Albert Forsman".

Albert Forsman

Bonnie Forsman
641 E Camp St
Ely, MN 55731

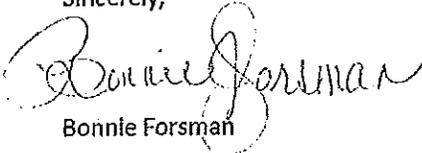
Michael Kalnbach, P.E.
MN Dept. of Transportation
MnDOT - District 1
1123 Mesaba Ave.
Duluth, MN 55811

Dear Sir:

As a resident of the City of Ely and a strong supporter of the goals of the Highway 169 North Task Force, I am writing in support of the Preferred Alternative 3A reconstruction plan for the Six Mile Lake - Eagles Nest Area of Highway 169. I firmly believe this plan is the safest and most economically and environmentally sound alternative.

This project has already taken excessively long to be completed. Please do all you can to see this project through without further delay.

Sincerely,



Bonnie Forsman

Jacob Forsman
419 Woodbridge Ave.
P.O. Box 498
Buhl, MN 55713

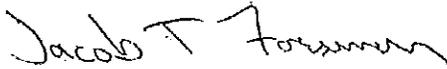
Michael Kalnbach, P.E.
MN Dept. of Transportation
MnDOT - District 1
1123 Mesaba Ave.
Duluth, MN 55811

Dear Sir:

As a resident of the City of Buhl and a strong supporter of the Highway 169 North Task Force, I am writing in support of the Preferred Alternative 3A reconstruction plan for the Six Mile Lake - Eagles Nest Area of Highway 169. I firmly believe this plan is the safest and most economically and environmentally sound alternative.

This project has already taken excessively long to be completed. Please do all you can to see this project through without further delay.

Sincerely,



Jacob Forsman

Kyle Forsman
304 E James St
Ely, MN 55731

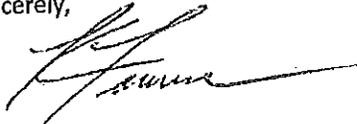
Michael Kalmbach, P.E.
MN Dept. of Transportation
MnDOT - District 1
1123 Mesaba Ave.
Duluth, MN 55811

Dear Sir:

As a resident of the City of Ely and a strong supporter of the goals of the Highway 169 North Task Force, I am writing in support of the Preferred Alternative 3A reconstruction plan for the Six Mile Lake - Eagles Nest Area of Highway 169. I firmly believe this plan is the safest and most economically and environmentally sound alternative.

This project has already taken excessively long to be completed. Please do all you can to see this project through without further delay.

Sincerely,

A handwritten signature in black ink, appearing to read 'K. Forsman', written over a horizontal line.

Kyle Forsman

HWY 1/169 Improvements Eagles Nest Lake Project

01-21-15 Public Hearing/Open House

COMMENTS & FEEDBACK

*NAME: MIKE FORSMAN
*BUSINESS NAME (If Applicable): _____
*PHONE 218 365 5789
*EMAIL forsmanmd@hotmail.com
*ADDRESS 1423 E. HARVEY ST. ELY, MN 55731
(* Providing contact information is optional)

COMMENTS: I am in full support of the 3A Alternative. I believe MN DOT's preferred alternative has been well thought out for the primary reason of safety of the traveling public but also strong consideration of environmental considerations and social impacts.

I travelled that stretch of road all of my 67 years. As a Steelworker for Inland Arcelor Mittal now Steel and as a St. Louis County commissioner I've put a million miles plus between Ely and Virginia.

Again 3A is the right decision!

Thanks to SEH for their Environmental work

Michael Forsman

Please fill out this comment form and leave in the comment box or with project staff tonight. Your feedback will be shared with project staff and included in the project record.

Find more information and sign up for email updates at the project website:

www.dot.state.mn.us/d1/projects/Hwy169eagles/index.html

Comments may also be mailed to Michael Kahlbach, MnDOT Project Manager, at: 1123 Mesabi Avenue, Duluth, MN 55811 or submitted via e-mail at michael.kahlbach@state.mn.us. Comments must be received by January 30, 2015.

----- Message from karen hill <ikare44@hotmail.com> on Tue, 27 Jan 2015 17:12:31 -0600 -----

To: "Kalnbach, Michael K (DOT)"
<michael.kalnbach@state.mn.us>

Subject: HWY 169

Highway 169 Preferred Alternative 3A route is the best choice and should be the only choice in making HWY169 between Soudan and Ely a safe road. please do the right thing and choose Highway 169 Preferred Alternative 3A route.
thank you. karen s hill

ikare

HWY 1/169 Improvements Eagles Nest Lake Project

01-21-15 Public Hearing/Open House

COMMENTS & FEEDBACK

*NAME: DALE HEGFORS
*BUSINESS NAME (if Applicable): _____
*PHONE: 718-966-2416
*EMAIL: None
*ADDRESS: 614 E. Camp St. Ely, MN. 55731
(* Providing contact information is optional)

COMMENTS: I am a member of 169 Task Force since 2008. Therefore I am in favor of any and all work done on Highway 169 from Virginia Lake Intertown Highway needs wider shoulders and many other in pavement. Any work done will be great plus.

I Thank You
Wale Hefors

Please fill out this comment form and leave in the comment box or with project staff tonight. Your feedback will be shared with project staff and included in the project record.

Find more information and sign up for email updates at the project website:

www.dot.state.mn.us/d1/projects/Hwy169eagles/index.html

Comments may also be mailed to Michael Kahlbach, MnDOT Project Manager, at: 1123 Mesabi Avenue, Duluth, MN 55811 or submitted via e-mail at michael.kahlbach@state.mn.us. Comments must be received by January 30, 2015.

----- Message from info <info@rangeblues.com> on Tue, 20 Jan 2015 20:37:47 -0600 -----

To: "Kalnbach, Michael K (DOT)"

<michael.kalnbach@state.mn.us>

Subject: 169 redevelopment

Michael,

As a business owner in Ely, I would encourage you to please consider "alternative 3A" in the proposed HWY169 redevelopment.

I know you are aware of the dangers along this stretch of highway.

I sincerely believe this proposal is the best and safest option for everyone served by HWY169.

I hope you will do what you can to make travel into Ely safer for my customers, event attendees and for my own family.

Thank you for your thoughtful consideration. -MJ

Michael Jankovec

Boundary Waters Blues Festival

Ely TV

127 East Sheridan

Ely, MN 55731

218-349-5520

www.ElyBlues.com

www.ElyTV.org

HWY 1/169 Improvements Eagles Nest Lake Project

01-21-15 Public Hearing/Open House

COMMENTS & FEEDBACK

*NAME: Paul Johnson

*BUSINESS NAME (if Applicable): _____

*PHONE 218 365-4025

*EMAIL _____

*ADDRESS 3681 Highway 169 Fly, MN 55731

(* Providing contact information is optional)

COMMENTS: Highway 169 has been badly in need of
rebuilding for many years, and I am certainly glad
to see it looks like it will happen. I drove on this
treacherous road for 32 1/2 years, commuting to Minnetonka.
Too bad it could not have been fixed then, but thank you to
all involved for your persistence.

Please fill out this comment form and leave in the comment box or with project staff tonight. Your feedback will be shared with project staff and included in the project record.

Find more information and sign up for email updates at the project website:

www.dot.state.mn.us/d1/projects/Hwy169eagles/index.html

Comments may also be mailed to Michael Kahlbach, MnDOT Project Manager, at: 1123 Mesabi Avenue, Duluth, MN 55811 or submitted via e-mail at michael.kahlbach@state.mn.us. Comments must be received by January 30, 2015.

January 20, 2015

Mr. Michael Kalnbach, P.E.
MN- Dept. of Transportation
MNDOT- District 1
1123 Mesaba Ave.
Duluth, MN 55811

SUBJECT: Highway 169 North- SP6904-46

Dear Michael:

I have attended most of the Highway Task Force and public meetings held by MNDOT concerning the Highway 169 project over the past seven or more years. My family and I own three separate cabins in the Eagle's Nest Lake area. Having also travelled this stretch of road for work for nearly sixteen years I have firsthand experience concerning black ice, dangerous corners, falling trees, and the multitude of vehicle accidents that have occurred during this time.

I have been a supporter of the South Route for Highway 169 since it was proposed. This route will result in the greatest opportunities for safety enhancements. We must also remember that safety was the driving factor in the late Congressman Jim Oberstar getting HPP money for this project. As a traveling motorist and property owner in the area of this construction, I support the preferred alternative 3A. This option will provide for significant safety enhancements as well as have little amount of social, economic and environmental impacts. I was extremely pleased that through the environmental assessment process that human lives and safety of the traveling public was taken into account, not only sulfate rock and the desires of a few that have cabins on Six Mile Lake.

My family and I are in complete support of the Preferred Alternative 3A and look forward to a timely completion of this long fought for safety improvement project.

Sincerely,

By 
Harold R. Langowski, P.E.

8074 Hwy 68
Britt, MN 55710

1394 Walsh Road
Ely, MN 55731

----- Message from "LindroosDM@aol.com" <LindroosDM@aol.com> on Thu, 29 Jan 2015 21:03:47 -
0600 -----

To: "Kalnbach, Michael K (DOT)"
<michael.kalnbach@state.mn.us>

Subject: support 3A

I support 3A

Thank you,

Diane Lindroos
Ely, Mn.

HWY 1/169 Improvements Eagles Nest Lake Project

01-21-15 Public Hearing/Open House

COMMENTS & FEEDBACK

*NAME: ROBERT M. MAKI
*BUSINESS NAME (If Applicable): _____
*PHONE 218-265-4520
*EMAIL Lmaki@frontier.com
*ADDRESS 313E CHAPMAN ST - ELY
(* Providing contact information is optional)

COMMENTS: PREFER OPTION 3A - IT'S BEEN LONG OVERDUE BUT
THE TASK FORCE & MNDOT'S EFFORTS ARE GREATLY APPRECIATED.
169 THANKS OF THE OPPORTUNITY TO COMMENT.

Please fill out this comment form and leave in the comment box or with project staff tonight. Your feedback will be shared with project staff and included in the project record.

Find more information and sign up for email updates at the project website:

www.dot.state.mn.us/d1/projects/Hwy169eagles/index.html

Comments may also be mailed to Michael Kahlbach, MnDOT Project Manager, at: 1123 Mesabi Avenue, Duluth, MN 55811 or submitted via e-mail at michael.kahlbach@state.mn.us. Comments must be received by January 30, 2015.

- Message from "rmarsnik@frontiernet.net" <rmarsnik@frontiernet.net> on Wed, 21 Jan 2015 11:49:25 - 0600 -

To: "Kalnbach, Michael K (DOT)"
<michael.kalnbach@state.mn.us>
Subject: Eagles Nest Reconstruction Project

Mr. Kalnbach,

I am writing in favor of Mn Dept. of Transportation's Preferred Alternative 3A hybrid reconstruction plan for the Eagle's Nest area.

As chairman of the Ely School Board the safety of our students is a major concern of mine. On a daily basis, during the school year, we transport students on this highway. Preferred Alternative 3A appears to address many of my concerns.

Delays rather than a detour is also important to us. When repairs were made on Highway 1 a few years back the detour increased our transportation costs. Alternative 3A will eliminate that cost.

Any consideration that you give to this request will be deeply appreciated.

Thank you.

Ray Marsnik
School Board Chair
Ely Minnesota

--- Message from Polly McDonald <breitungclerk@frontier.com> on Thu, 22 Jan 2015 11:37:15 -0600 -----

To: "Kalnbach, Michael K (DOT)"

<michael.kalnbach@state.mn.us>

Subject: Hwy #169 route

In favor of 3A

Valeda (Polly) McDonald
Box 291
Soudan, MN 55782

HWY 1/169 Improvements Eagles Nest Lake Project

01-21-15 Public Hearing/Open House

COMMENTS & FEEDBACK

*NAME: HANS OLSEN
*BUSINESS NAME (If Applicable): _____
*PHONE 218-365-6318
*EMAIL HANSOLSEN44@YAHOO.COM
*ADDRESS 4349 BIRCHWOOD LN ELY, MN 55731
(* Providing contact information is optional)

COMMENTS: Build it and they will come!

Hans Olsen

Please fill out this comment form and leave in the comment box or with project staff tonight. Your feedback will be shared with project staff and included in the project record.

Find more information and sign up for email updates at the project website:

www.dot.state.mn.us/d1/projects/Hwy169eagles/index.html

Comments may also be mailed to Michael Kahlbach, MnDOT Project Manager, at: 1123 Mesabi Avenue, Duluth, MN 55811 or submitted via e-mail at michael.kalnbach@state.mn.us. Comments must be received by January 30, 2015.

-- Message from "JoeCarolin@aol.com" <JoeCarolin@aol.com> on Sun, 25 Jan 2015 19:36:51 -0600 -----
To: "Kalnbach, Michael K (DOT)"
<michael.kalnbach@state.mn.us>
Subject: Highway 169 Project

I live in the Eagles Nest area, and am glad to know this project is moving along. I agree that Option 3A is the best alternative. I am concerned about sulfate, and trust that the Department of Transportation is able to mitigate this problem. I don't agree with those who dismiss this issue, saying rock has been blasted in the past with no danger to the environment, but I believe that Minnesota highway engineers are more knowledgeable now than they were 40 - 50 years ago. I am trusting that safeguards will be put in place for this project.

I appreciate your finding a way to keep 169 open, with minimal detours, during this project. I look forward to a safer road, and appreciate your working with the Mesabi Trail committee, so there will be better and safer opportunities for bicycling.

Caroline Owens

----- Message from "doktorb@frontiernet.net" <doktorb@frontiernet.net> on Thu, 15 Jan 2015
12:04:42 -0600 -----

To: "Kalnbach, Michael K (DOT)"
<michael.kalnbach@state.mn.us>

Subject: HWY 169 EaglesNest Project

Just wanted to comment that we have waited too long for this treacherous stretch of roadway to be redesigned. I have been driving from Virginia to Ely and back 3-5 times per week for the past 25 years and this stretch of Hwy 169 has got to be one of the most hazardous areas in Minnesota. From the blind corners and lack of passing lanes to the snow and ice buildup every winter it's a wonder that I haven't had more bad experiences than I have. The shading and corners here are deadly and I'm sure there are records of that fact. I would like to express my support of the 3A Alternative that is part of the redesign project.

Thank you for the opportunity,

L.A. Phelps
doktorb@frontiernet.net

----- Message from "Pope, Michael J" <MicPope@CWTSatoTravel.com> on Tue, 20 Jan 2015 16:18:10 - 0600 -----

To: "Kainbach, Michael K (DOT)"
<michael.kainbach@state.mn.us>
cc: "Pope, Michael J" <MicPope@CWTSatoTravel.com>
Subject: FW: Highway 169 Preferred alternate 3A

From: Pope, Michael J
Sent: Tuesday, January 20, 2015 4:12 PM
To: michael.kainbach@state.mn
Cc: Pope, Michael J
Subject: Highway 169 Preferred alternate 3A

Mr. Kainbach,

As a resident of Ely for 15 years I strongly express my wishes that you support option 3A Highway 169 Eagles Nest Area Reconstruction Project.
I agree with the Highway 169 North Task Force for Option 3A.
Thank You for supporting the best option.

Michael Pope

1131 E Chapman St.
Ely Mn. 55731

micpope@cwtsatotravel.com

Please consider the environment before printing this email.

HWY 1/169 Improvements Eagles Nest Lake Project

01-21-15 Public Hearing/Open House

COMMENTS & FEEDBACK

*NAME: CHUCK KENNER
*BUSINESS NAME (If Applicable): _____
*PHONE 218-780-9046
*EMAIL _____
*ADDRESS _____

(* Providing contact information is optional)

COMMENTS: LETS BUILD THE ROAD

Please fill out this comment form and leave in the comment box or with project staff tonight. Your feedback will be shared with project staff and included in the project record.

Find more information and sign up for email updates at the project website:

www.dot.state.mn.us/d1/projects/Hwy169eagles/index.html

Comments may also be mailed to Michael Kahlbach, MnDOT Project Manager, at: 1123 Mesabi Avenue, Duluth, MN 55811 or submitted via e-mail at michael.kahlbach@state.mn.us. Comments must be received by January 30, 2015.



To: Bob Rogers/seh@SEH,
Cc:
Bcc:
Subject: Fw: comments
From: Bob Rogers/seh - Wednesday 03/04/2015 03:47 PM

----- Message from Roger Skraba <info@yatahey.com> on Mon, 26 Jan 2015 16:03:14 +0000 -----

To: "Kalnbach, Michael K (DOT)"
<Michael.Kalnbach@state.mn.us>

Subject: 169

Michael,
I have been involved on this project for over fifteen years and can finally say I believe we have come to a consensus. The environmental impacts of the new construction can be mitigated. This allows for the route to be safe, which is the first and for most issue of mine. Thank you for your patience and let's hope this route gets full approval.
Roger J. Skraba
Ely, MN

Sent from my iPad

1106 18St.N.
Virginia, MN 55792
January 6, 2015

Dear Mike,

As mentioned to you in a recent letter you received from Bill Ezar, I am very pleased MNDOT has chosen the alternative 3A Route I also agree strongly that we try to improve on the 6 foot paved 2 foot gravel shoulders.

I am especially pleased that the sentiment of the majority of concerned citizens was taken into consideration by MNDOT Officials.

I have been very disappointed with the efforts a few landowners on Six Mile Lake have taken to delay our project. All the various studies done by your office due to complaints on their part was to me, very wasteful spending and time consuming. I have kept all the correspondence received by Lake members and feel they unjustly accused the Task Force of wrong doing. Their threats at recent meetings that upon completion of our project at Eagles Nest we should be prepared for law suites. It certinly would be appropriate to have everyone on the same page regarding the impact of having a much safer highway.

Many people have been onvolved in the process of this project. Individuals such as Henry Hanka, Andy Hubley, the Ely Joint Powers Board, Commissioner Mike Forsman, Brian Larson, Dennis Johnson, Mike Robinson, along with other MNDOT Staff have all contributed to working with the project that started back in the Fall of 1998. Enclosed are a few news articles updating the 169 Project between Highway 53 and Ely/Winton.

Thanks again to both you and Duane for your patience and guidance of these very important stages of this well needed road improvement.

Sincerely, *Rudy Semeja*
Rudy Semeja, Co-Chair 169 Highway Project

January 25, 2015

Michael Kalnbach, P.E.
District 1 Project Manager
Minnesota Department of Transportation
1123 Mesaba Avenue
Duluth, MN 55811

Re: Comments regarding Hwy 169 Project between Six Mile Lake Road and Bradach Road.

I appreciate the opportunity to provide written comments on the Preferred Alternative presented at the Public Meeting in Ely on January 21, 2015.

I am in favor of the project overall and support the preferred alternative since it improves the safety of the road without significantly compromising the health, safety, and livelihood of people who live in the area as it relates to proposed closures of the road.

My husband and I are year-round residents on the Trygg Road that enters Highway 169 at about the midpoint of this project. Between the two of us, we drive on either the westerly or easterly section hundreds of times a year. We have seen all sorts of unsafe conditions and actions over the years and the construction of the current road does not allow for safe driving, safe passing, or safe emergency stopping.

I know you have numbers on the frequency of accidents that get documented by authorities but there is no way to quantify the many more frequent one-car accidents that are not reported. Just a few days ago, we provided help to a young woman traveling alone on a cold evening who flew off the road on one of the slippery corners. She was on the opposite side of the road coming at us, but luckily she hit the ditch on our side of the road before she hit us. It could have been a serious two car head on. We gave her a ride to Soudan to get help since her car needed to be towed. That was the third vehicle we have seen in the ditch in the past several weeks. This is not an unusual weekly occurrence. It's also not possible to quantify the number of people who have quit using this road due to safety issues. My mom, who lives in Tower, is an example. After my Dad went in the ditch a number of years ago (he has since passed away), my mom quit driving out to visit us in the winter - she is afraid of this road. There are others with the same concerns who have quit driving places along this road or now travel from Ely thru Babbitt to get to Virginia though it may be a bit longer from their house.

While I would prefer the road have more safety upgrades, I don't want them at the expense of longer or more frequent road closures. This is a serious health and safety concern for those of us who live in the area. While it may be 13 miles to the hospital in

Ely for us right now, a closure would mean 60 miles. This means more than an hour rather than 15/20 minutes to get treatment, with double that delay if we have to wait for an ambulance to arrive first. This is a matter of life and death in the case of an emergency. Even in a non-emergency situation, the inconvenience of getting to Ely for other services (i.e. doctor, dentist, library, meetings, restaurants, groceries) is unsatisfactory if there are full closures. This inconvenience will have a negative impact on local businesses. Tower has already suffered with the main street being closed last year. If traffic from Virginia is routed through Babbitt, businesses may be forced to close as many are already barely making it. Ely will be affected as well as some residents will decide to shop in Virginia rather than drive through Babbitt to Ely. I suspect schools will be affected as parents will have to make tough decisions if their children's time on the bus would increase from a half hour to several hours.

For the reasons expressed above, please accept this letter of support for the preferred alternative as part of the written record on this project. I understand that those of us who live here year around, and are much more impacted by final choices or lack thereof, can't have more influence on the final decision than others. But I wonder if there would be as much opposition to the safety upgrades by some of the seasonal residents if they had to drive the road in the winter.

Thank you for understanding the need to move forward with safety improvements on this road as soon as possible, and I appreciate that MNDOT has taken the detour minimization as a serious consideration.

Sincerely,

Barb Soderberg
1370 Trygg Road
Ely, MN 55731

218-365-5219 (H)
218-343-0609 (C)

----- Message from "svoll67@gmail.com" <svoll67@gmail.com> on Thu, 15 Jan 2015 19:02:48 -0600 -----
To: "Kainbach, Michael K (DOT)"
<michael.kainbach@state.mn.us>
Subject: Fwd: Preferred Alternative 3A - Highway 169

Sent from my iPad

Begin forwarded message:

Good Day,

Attached is a picture of my vehicle, this was taken Monday Jan 12 2015. This past Monday, my daughter was driving southbound on 169 near Clear Lake hit black ice on a curve, lost control and ended up rolling down the ditch landing up against trees. I thank God that she was not severely injured or killed.

Correction of this portion of highway is LONG overdue and needs to be addressed promptly.

Instead of saving a few trees, please save human lives.

Kind regards,
Shelley K Voll

michael.kainbach@state.mn.us

----- Message from "jweckman@frontiernet.net" <jweckman@frontiernet.net> on Wed, 28 Jan 2015
10:06:43 -0600 -----

To: "Kalnbach, Michael K (DOT)" <michael.kalnbach@state.mn.us>
Subject: Comments to MNDot on Highway 169 Preferred Alternative 3A
route

Hello, my name is Joan Weckman, 2460 Stebly Road, Ely, MN 55731, resident of Town of Morse, in St. Louis County.

I support the Preferred Alternative 3A route of the MN DOT/HWY 169 Project

This alternative provides a safe route for ALL. Please accept my comment on this proposal.

----- Message from Patti Wellvang <wellvang@midco.net> on Wed, 21 Jan 2015 19:28:45 -0600 -----

To: "Kainbach, Michael K (DOT)"

<michael.kainbach@state.mn.us>

Subject: Highway 1/169 Eagles Nest Lake Area Project

Reference a prior email sent to you late this afternoon, we are supporting Preferred Alternative 3A, regarding above project.

Thank you.

Larry and Patricia Wellvang

2 South 8th Ave. E.

Ely, MN 55731

Writes

1278 Walsh Road
Ely, MN, 55731

Dear Mr. Kalbach,

We are writing about our concerns with the delay of the repair of Hwy #169 between Soudan and Eagles Nest. No doubt the state officials, as well as ~~of~~ area residents are aware of the problems with black ice on this dangerous section of this road. This is a safety concern for those of us who drive this road almost daily. We want you to know we are in favor of the road work to be done with the alternative route 3A. It just seems to make good sense to use that route where the sun can ^{all} make a safer highway for all who drive it.

Thank-you for listing to the locals who support the states Alternative 3A route

Sincerely,
Percy (Priscilla) White

James S. White



HWY 1/169 Improvements Eagles Nest Lake Project

01-21-15 Public Hearing/Open House

COMMENTS & FEEDBACK

*NAME: Doug Whitney
*BUSINESS NAME (If Applicable): City of Ely Building Inspector
*PHONE: 612 598 4943
*EMAIL: DWhit10351@aol.com
*ADDRESS: 444-18th Ave S.W. Cambridge MN 55008
(* Providing contact information is optional)
146 E Harvey St, Ely MN 55731

COMMENTS:

I drive back and forth to Cambridge. 208 miles - 3 hrs 20 min

I have to plan trips around the weather and road conditions

I can not wait for a safer 169.

Minimal detours and good areas to pass are important.

There are not a lot of alternative routes to Ely - TH 169 is a very important highway.

I - support 3a



Please fill out this comment form and leave in the comment box or with project staff tonight. Your feedback will be shared with project staff and included in the project record.

Find more information and sign up for email updates at the project website:

www.dot.state.mn.us/d1/projects/Hwy169eagles/index.html

Comments may also be mailed to Michael Kahlbach, MnDOT Project Manager, at: 1123 Mesabi Avenue, Duluth, MN 55811 or submitted via e-mail at michael.kahlbach@state.mn.us. Comments must be received by January 30, 2015.

To:
Michael Kalnbach, P.E.
MN Dept. of Transportation
MnDOT-District 1
1123 Mesaba Ave.
Duluth, MN 55811

Subject:
Highway 169 North – Eagles Nest Project – SP6904-46 – Preferred Alternative 3A

Dear Mr. Kalnbach,

Being a person who has traveled this road for 31 years going to work daily at Minntac and also driven many loads of forest products up to 3 loads a day for another 4 years I know this road well. I have seen many cars in the ditch and also the semi truck in which claimed the driver's life. Anyone whom has traveled this road knows of all the black ice and slippery spots in the area which would be eliminated by the Route 3A. I am glad to see that the road near the Mud Creek area would be widened and corners would be softened. I was involved in an accident near Mud Creek where a person had passed out and was over the center line heading toward the fuel tank on a fully loaded semi truck, there was just enough room to swing the truck away from the oncoming truck and bringing it back to my lane while he slide down the side of my trailer and bounced off of the pickup truck behind me. Luckily no one was hurt and the patrolman stated I was very lucky because my tire tracks were on the edge of the shoulder near a high embankment.

The Preferred Alternative 3A would be a safer route for all by eliminating the low lying area and will have the least amount

1 MINNESOTA DEPARTMENT OF TRANSPORTATION
2 Highway 1/169 Improvements
3 Six Mile Lake Road to Bradach Road
4 "Eagles Nest"
5 EA Public Hearing
6
7
8
9 January 21, 2015
10 6:00 p.m.
11 Vermilion Community College
12 1900 East Camp Street
13 Ely, Minnesota
14
15
16
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18
19
20
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22
23
24
25 REPORTED BY: Paula Berg

1

2 Meeting facilitator:

3 Robert Rogers, Senior Planner

4 SHORT ELLIOTT HENDRICKSON

5 3535 Vadnais Center Drive

6 St. Paul MN 55110

7

8 The following are public comments taken
9 before Paula E. Berg, RPR, Certified Shorthand
10 Reporter, Notary Public.

11

12 (Public comments were encouraged, and
13 participants presented at the table of the Court
14 Reporter.)

15

05:59PM 16 MS. ANGELA K. CAMPBELL: My name is
06:00PM 17 Angela, middle initial K as in kite, Campbell,
06:00PM 18 C-A-M-P-B-E-L-L.

06:00PM 19 I have been traveling on 169 for
06:00PM 20 30 years.

06:00PM 21 And in that time frame I have had two
06:00PM 22 accidents and my car has gone into the ditch and
06:00PM 23 I've been rescued by local individuals who brought
06:00PM 24 me back into town.

06:00PM 25 I've never reported those accidents.

06:00PM 1 I've had several friends injured, and
06:00PM 2 I've had one friend die near the Clear Lake Curve,
06:01PM 3 and that was trauma not only for the family but
06:01PM 4 for the community.

06:01PM 5 I want to see this revision go
06:01PM 6 forward.

06:01PM 7 Thank you.

8

06:23PM 9 MS. JACKIE MONAHAN-JUNEK: Hi, I'm
06:23PM 10 Jackie Monahan-Junek from the Eagles Nest
06:23PM 11 Township.

06:23PM 12 I live on Eagles Nest lake number
06:23PM 13 four, and I drive this stretch of roadway every
06:23PM 14 day. I've put on about one-quarter of a million
06:24PM 15 miles in the last ten years.

16 And the issues I see driving this
06:24PM 17 stretch of road every day morning and night on my
06:24PM 18 way to my job in Eveleth is people are going too
06:24PM 19 fast, they're coming up behind me.

06:24PM 20 I can live without passing lanes in
06:24PM 21 this area, but the shoulders are so narrow there
06:24PM 22 is no way to avoid anybody that is oncoming
06:24PM 23 crossing the center line.

06:24PM 24 I don't see the need for the expense
06:24PM 25 or the need to change the character of northern

06:24PM 1 Minnesota.

06:24PM 2 Our economy is based on taconite,
06:24PM 3 tourism and timber. This impacts our tourism
06:24PM 4 part.

06:24PM 5 You can travel throughout the US to
06:24PM 6 wonderful places much larger than our community
06:24PM 7 and the roads are still quiet and quaint and just
06:24PM 8 a little more controlled with wider shoulders, so
06:24PM 9 I don't see the need for the change.

06:24PM 10 If they do end up making this change
11 I'm glad they chose a route that didn't cause an
12 hour delay for all of us that are traveling
06:24PM 13 outside of our township to go to work.

06:25PM 14 Okay. So I just encourage them to
06:25PM 15 make a decision to make a small change, see how
06:25PM 16 that works, and then they can go to more elaborate
06:25PM 17 changes.

06:25PM 18 **MR. GREG JUNEK:** I'm Greg Junek,
06:25PM 19 J-U-N-E-K.

06:25PM 20 I live in Eagles Nest, and I'm not for
06:25PM 21 this. I'd rather have it stay the same as it is.

06:25PM 22 MnDOT even cited right from the very
06:25PM 23 beginning that this stretch of road is no
06:25PM 24 different than any other stretch of road in
06:25PM 25 Minnesota for as far as accidents go.

06:26PM 1 And it just takes the aesthetics away
06:26PM 2 from the area to be moving it over and widening
06:26PM 3 everything out.

06:26PM 4 That's it.

08:01PM 5 MS. JEANNE K. TOME: My name is Jeanne
08:01PM 6 Tome, T-O-M-E.

08:01PM 7 I very much appreciate that it finally
08:01PM 8 looks like this road is going to get fixed.

08:01PM 9 It is a death trap the way it is now.

08:01PM 10 My mother rolled her car there, it was
08:01PM 11 the beginning of the end for her. Five years
08:01PM 12 later she was dead.

08:01PM 13 I don't want to see other families go
08:01PM 14 through what we went through because of poor --
08:01PM 15 not poor construction, but poor design.

08:01PM 16 And this needs fixing bad.

08:01PM 17 I'm very happy to see it's finally
08:02PM 18 going to come to fruition.

08:02PM 19 It's not the best we wanted but it's
08:02PM 20 the best we're going to get, and it's better than
08:02PM 21 nothing. Thank you.

08:02PM 22 MR. DAN HUMAY: My name is Dan Humay,
08:02PM 23 H-U-M-A-Y. I live at 1220 Walsh Road in Eagles
24 Nest Township.

08:02PM 25 And I'm very appreciative of the

08:02PM 1 progress that is being made here to provide us
08:02PM 2 with a safe travel route between Highway 53 and
3 Ely.

08:02PM 4 My concern is this: My concern is
08:02PM 5 with mitigation and that the proper processes are
08:03PM 6 implemented and followed as-needed.

08:03PM 7 Mention was made of the DNR doing some
08:03PM 8 mitigation work in the park when they uncovered
08:03PM 9 sulfide rock.

08:03PM 10 They have done an abysmal shameful
08:03PM 11 job. They have piled the rock, it's now exposed
08:03PM 12 and not covered as it should be. And they are a
08:03PM 13 state agency that is charged with environmental
08:03PM 14 responsibility.

08:03PM 15 I hope that the overseers of this
08:03PM 16 project will follow the regulations and do what's
08:03PM 17 necessary to make sure that mitigation is done
08:03PM 18 properly.

08:03PM 19 Thank you very much.

08:04PM 20 **MR. GREG DOSTERT:** Just for the
08:04PM 21 record, Greg A. Dostert. Town board supervisor,
08:04PM 22 Braden Township.

08:04PM 23 We have as a resolution approved the
08:04PM 24 three-day plan.

08:04PM 25 Can you put that?

08:04PM 1 **MR. THOMAS RUKAVINA:** My name is
08:04PM 2 Thomas Rukavina, and I'm a county commissioner for
08:05PM 3 this district for the Ely area.

08:05PM 4 And I'm a former state representative
08:05PM 5 for just south of this area.

08:05PM 6 And I have been supportive of the
08:05PM 7 safety issue for this highway for 15 years.

08:05PM 8 And I have recently had the county
08:05PM 9 board in St. Louis County pass a resolution in
08:05PM 10 support unanimously seven to nothing for this
08:05PM 11 project.

08:05PM 12 It's always been a safety issue, and
08:05PM 13 we are concerned about the safety of our community
08:05PM 14 and our children and our seniors and everyone
08:05PM 15 else, so we want the Federal Highway
08:05PM 16 Administration and everyone else involved in this
08:05PM 17 to understand that this has always about safety.

08:05PM 18 And we think this proposed preferred
08:05PM 19 route is the best route for us.

08:05PM 20 Thank you.

08:06PM 21 **MS. LINDA KEITH:** I am Linda Keith,
08:06PM 22 the city clerk/treasurer, K-E-I-T-H, city
08:06PM 23 clerk/treasurer for the city of Tower.

08:06PM 24 On behalf the City of Tower and the
08:06PM 25 city council we would like to go on record in

08:06PM 1 support of MnDOT's Option 3A.

08:06PM 2 We feel that this is the best route to
08:06PM 3 serve the people of Tower, the businesses of
08:06PM 4 Tower, and the Tower area ambulance service.

08:06PM 5 We wish to thank MnDOT for their
08:06PM 6 perseverance and continuing efforts to get this
08:06PM 7 project completed and provide safe roads for our
08:06PM 8 residents and tourists.

08:06PM 9 Thank you.

08:07PM 10 MR. CHUCK RENNER: My name is Chuck
08:07PM 11 Renner.

08:07PM 12 And I would just like to comment that
08:07PM 13 I believe they have picked the safest route with
08:07PM 14 this route that they have got designated.

08:07PM 15 And I believe that that's the route
08:07PM 16 that we should take, and this thing should be
08:07PM 17 built as soon as possible without any delay, or
08:07PM 18 the fewest delays possible.

08:07PM 19 I've been working on this for myself
08:08PM 20 ten years, almost killed on the highway ten years
08:08PM 21 ago.

08:08PM 22 Comments were made, I've gone through
08:08PM 23 three sets of highway engineers here.

08:08PM 24 Now we're down to these guys, which
08:08PM 25 hopefully it looks like they're going to be able

08:08PM 1 to get the project done.

08:08PM 2 But we need to get it done ASAP.

08:08PM 3 And that is my comment, and I want to

08:08PM 4 thank you.

08:09PM 5 MR. DAVID W. JOHNSON: My name is

08:09PM 6 David W. Johnson from Ely.

08:09PM 7 And I've lived in Ely all of my life,

08:09PM 8 and I worked at Inland Steel, which was

08:09PM 9 MrcelorMittal, for 30 years.

08:09PM 10 And I drove that road, or rode in a

08:09PM 11 car every day, every workday for 30 years, and

08:09PM 12 that road needs improvement.

08:09PM 13 And it's time to quit the planning and

08:09PM 14 start to do the construction.

08:09PM 15 And I agree we didn't get everything

08:09PM 16 we wanted, but I think it's a good compromise.

08:09PM 17 So it's a good, it's a wise use of tax

08:09PM 18 payers' money.

08:09PM 19 And safety is the most important thing

08:09PM 20 because I saw a lot of accidents there too in the

08:09PM 21 30 years that I drove that road.

08:09PM 22 Thank you. Thank you very much.

23

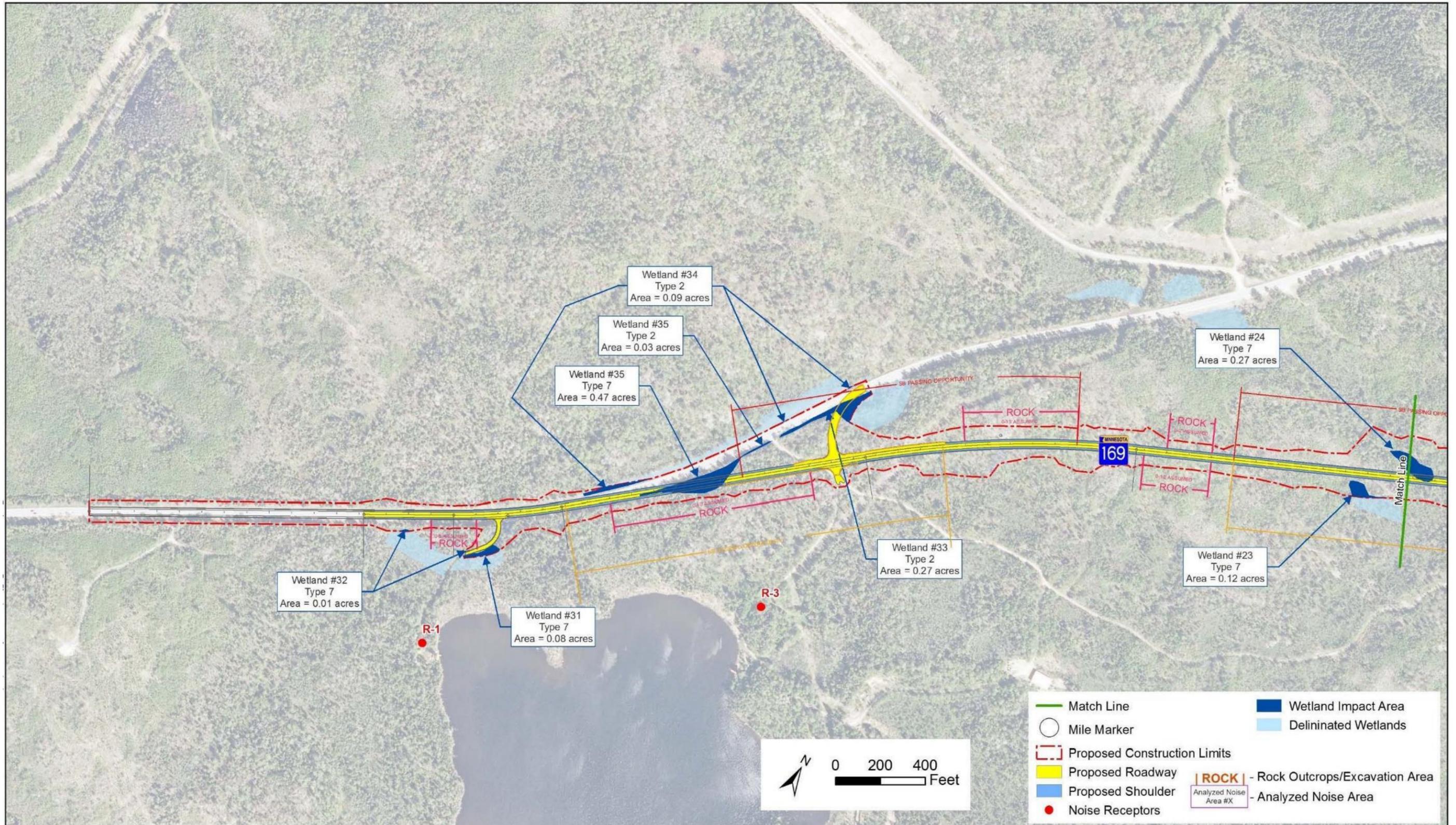
24 (This concluded the public statements

25 made in Ely, Minnesota on January 21, 2015.)

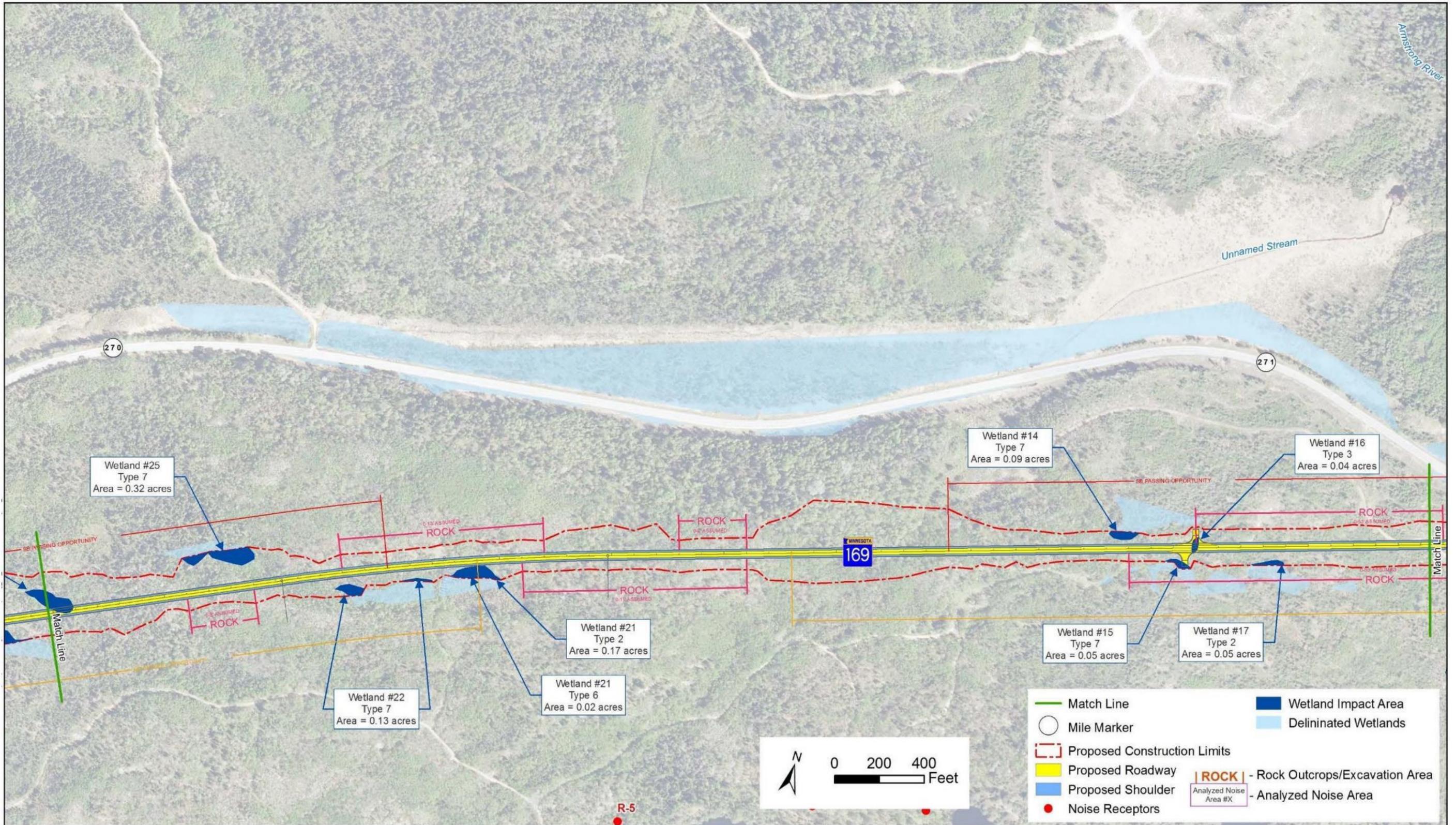
**APPENDIX C – Highway 1/169 Eagles Nest Lake Area
Improvement Project – Preliminary Layout**

(Figures 1 through 5)

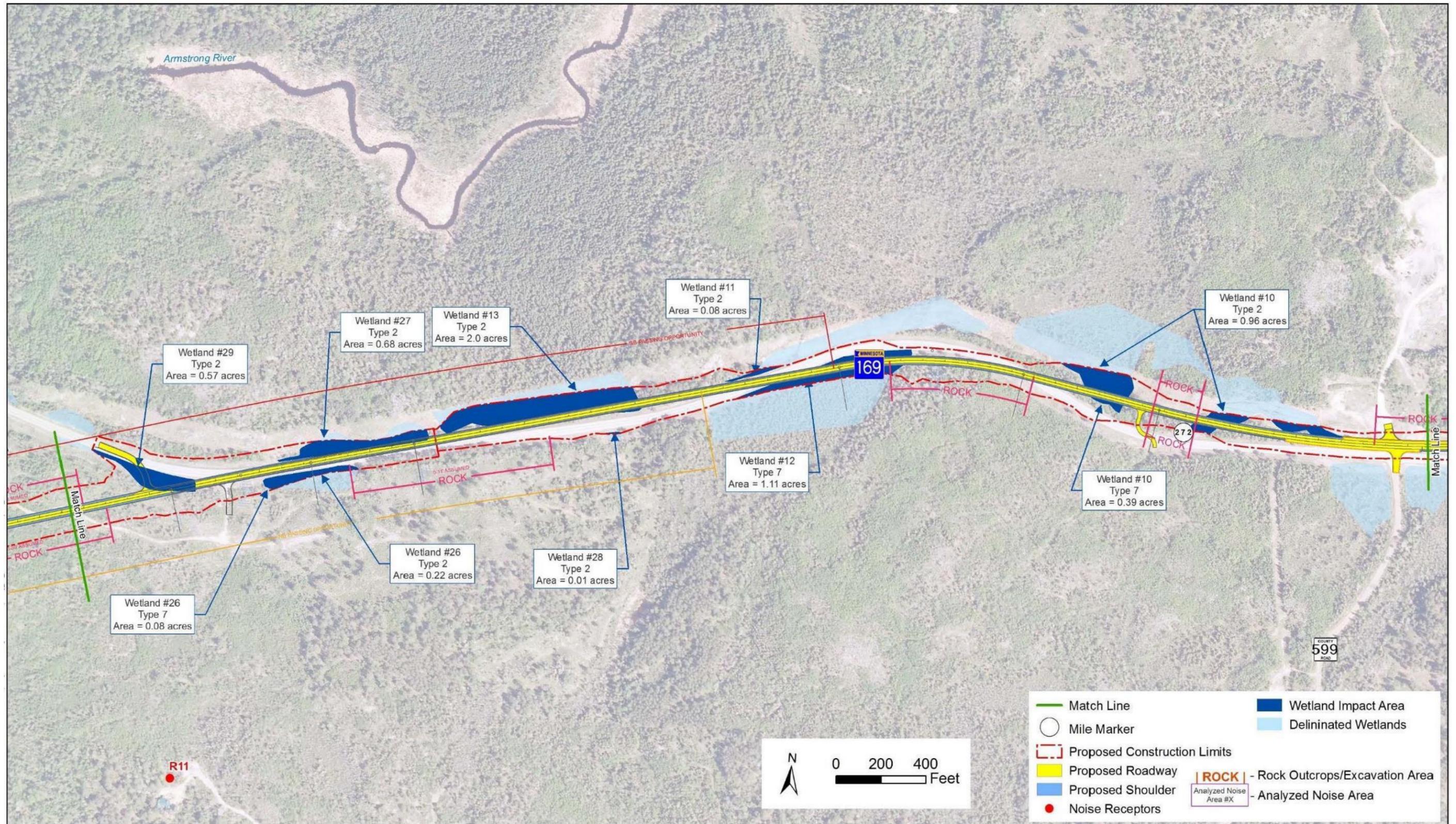
PRELIMINARY LAYOUT – FIGURE 1



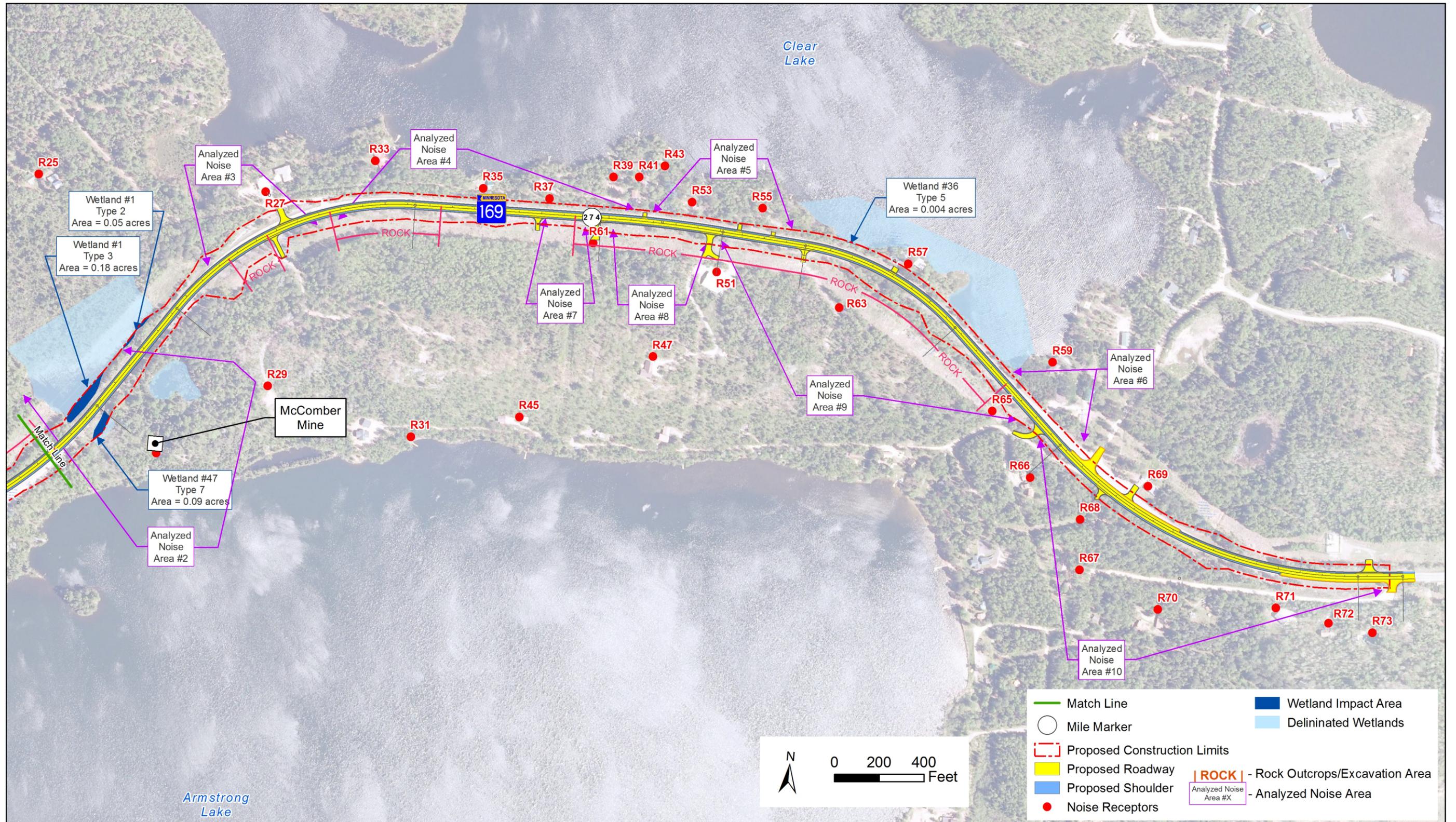
PRELIMINARY LAYOUT – FIGURE 2



PRELIMINARY LAYOUT – FIGURE 3



PRELIMINARY LAYOUT – FIGURE 5



APPENDIX D – Recent Project Correspondence

USFWS CANADA LYNX AND NORTHERN LONG-EARED BAT CONCURRENCE LETTER (12/16/14)

MNDOT OES GRAY WOLF DETERMINATION (02/02/15)

USFWS RESPONSE RE: WOLF (3/11/2015)

US ARMY CORPS OF ENGINEERS LETTER (3/6/15)

USFWS CANADA LYNX AND NORTHERN LONG-EARED BAT CONCURRENCE LETTER (12/16/14)



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Twin Cities Field Office
4101 American Blvd E.
Bloomington, Minnesota 55425-1665

December 16, 2014

Mr. Jason Alcott
Natural Resource Specialist
Minnesota Department of Transportation
395 John Ireland Boulevard
St. Paul, Minnesota 55155-1899

FWS No. 03E1900-2015-I-0039

Dear Mr. Alcott:

We have received your email dated December 11, 2014, regarding the proposed Trunk Highway 1/169 Roadway Reconstruction/Realignment Project for the Federal Highway Administration (FHWA) and its effects on Canada lynx (*Lynx canadensis*), Canada lynx critical habitat, and the Northern long-eared bat (*Myotis septentrionalis*), which was proposed as federally-endangered on October 2, 2013, in accordance with Section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C., 1531 et seq.).

The Minnesota Department of Transportation (MnDOT) on behalf of FHWA proposes to reconstruct approximately 5.6 miles of Highway 1/169 in the Eagles Nest Lake Area of St. Louis County, Minnesota. The proposed activities consist of widening the shoulders, expanding clear zones, adding turn/bypass lanes and realigning of portions of the highway. The MnDOT requested concurrence with a "may affect but not likely to adversely affect" determination for Canada lynx and its critical. The MnDOT also requested an informal conference on the Northern long-eared bat (NLEB). A complete administrative record of this consultation is on file in this office.

Canada Lynx

Your December 11, 2014, email assessed the effects of the proposed Highway 1/169 Reroute Project on the federally-threatened Canada lynx. We concur with your determination that the proposed project may affect, but will not likely adversely affect the Canada lynx. Our concurrence is based on Highway 1/169 retaining the same speed limit as the old alignment and the likelihood that the proposed project will not result in increased traffic.

In addition, the project footprint impacting approximately 75 acres of trees along a small linear corridor will not result in a substantial loss of boreal forest in comparison to the surrounding landscape. Three miles of the proposed 5.6 miles of reconstruction will occur on, or in close proximity to the existing roadway, reducing impacts to the surrounding habitat. The remaining 2.5 miles is proposed to be relocated south of the existing alignment through forested habitat.

The abandoned portion of the highway will be converted to approximately one mile of residential access road and 1.5 miles of designated trail that may be incorporated into the Mesabi Trail. All 2.5 miles will be narrowed and revegetated based on their designated use. While the right-of-way corridor is not being removed completely, the revegetation, limited use, and reduced speed limit are anticipated to benefit the species.

Further, we concur that the proposed project will not adversely affect lynx critical habitat. Critical habitat for lynx is defined as boreal forest landscapes supporting a mosaic of differing successional forest stages and containing the following Primary Constituent Elements (PCE):

- a) Presence of snowshoe hares and their preferred habitat conditions, including dense understories of young trees or shrubs tall enough to protrude above the snow;
- b) Winter snow conditions that are generally deep and fluffy for extended periods of time;
- c) Sites for denning having abundant coarse, woody debris, such as downed trees and root wads; and
- d) Matrix habitat (e.g., hardwood forest, dry forest, non-forest, or other habitat types that do not support snowshoe hares) that occurs between patches of boreal forest in close juxtaposition (at the scale of a lynx home range) such that lynx are likely to travel through such habitat while accessing patches of boreal forest within a home range. The important aspect of matrix habitat for lynx is that these habitats retain the ability to allow unimpeded movement of lynx through them as lynx travel between patches of boreal forest.

The concurrence request letter addressed the effects of the proposed project to the lynx PCEs. The proposed project is not anticipated to substantially decrease suitable lynx habitat (PCE a, b, c, d). Denning habitat is not anticipated to be present in the action area (PCE c). Road and snow-compacted trail density (PCE b) will not increase substantially, as less than 2.5 miles of additional roadway will be created and approximately 1.5 miles of the proposed abandoned route would be narrowed and designated for trail use, resulting in limited additional snow compaction or road density.

Northern Long-eared Bat

The NLEB was proposed for federal listing under the ESA (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) on October 2, 2013. No critical habitat has been proposed at this time. Pursuant to Section 7(a)(4) of the ESA, federal action agencies are required to confer with the Service if they determine that the proposed federal action is likely to jeopardize the continued existence of the NLEB (50 CFR 402.10(a)). Action agencies may also voluntarily confer with the Service if the proposed action may affect a proposed species. To confer or conference on a species that is proposed for listing is similar to "consultation" on species that is listed under the ESA.

Although species proposed for listing are not afforded protection under the ESA, when a species is listed, the prohibitions against jeopardizing its continued existence and unauthorized "take"

are effective immediately, regardless of an action's stage of completion. Therefore, if implementation the proposed project occurs after a Northern long-eared bat final listing decision is made (a final listing decision is expected by April 2, 2015), consultation will likely be required under Section 7 of the Act. If the NLEB is listed as federally-threatened or endangered under the Act, and the proposed action "may affect" Northern long-eared bat, consultation will be required under Section 7 of the Act.

Your December 11, 2014, letter has made the determination that the proposed project is not likely to jeopardize the continued existence of this species and has requested informal conferencing. Our office will continue to assist the action agency in determining effects and will advise on ways to avoid or minimize adverse effects to the proposed species. The primary recommendation at this time to avoid and/or minimize impacts to NLEB is to conduct tree clearing outside of the summer roost season. The species is not anticipated to be present within the action area between October 15 and March 30, and clearing of trees during this time would not result in the need for an incidental take permit.

This concludes consultation under Section 7 of the Endangered Species Act, as amended, for the Canada lynx. Please contact the Service if the project changes or new information reveals effects of the action to proposed or listed species or critical habitat to an extent not covered in your Biological Assessment.

As stated, we will continue our coordination with your office to identify ways to minimize impacts to NLEB and to prepare for formal consultation, if necessary. If you have questions, please contact Mr. Andrew Horton, Fish and Wildlife Biologist, at 612-725-3548, extension 2208, or via email at andrew_horton@fws.gov.

Sincerely,



for Peter Fasbender
Field Supervisor

MnDOT OES Gray Wolf Determination (02/02/15)



To: Bob Rogers <brogers@sehinc.com>,
Cc:
Bcc:
Subject: RE: FOFC_TH 1-169 Eagles Nest_March 2015_without layout figures.docx
From: "Ross, Jennie (DOT)" <Jennie.Ross@state.mn.us> - Thursday 03/05/2015 07:15 AM

----- Message from "Alcott, Jason (DOT)" <jason.alcott@state.mn.us> on Mon, 2 Feb 2015 18:46:11-----

To: "Horton, Andrew" <andrew_horton@fws.gov>

cc: "Ross, Jennie (DOT)" <Jennie.Ross@state.mn.us>, "Kalnbach, Michael K (DOT)" <Michael.Kalnbach@state.mn.us>
Subject State Project 6904-46, Trunk Highway 1/169, Roadway Reconstruction/Realignment - Gray Wolf Determination : Habitat

Andrew, This email is follow up to the Section 7 determinations for S.P. 6904-46 on Trunk Highways 1/169 in St. Louis County Minnesota in light of the recent Federal court decision to relist wolves in the western Great Lakes area (including Michigan, Minnesota, and Wisconsin) under the Endangered Species Act, effective December 19, 2014.

Project Description

The Minnesota Department of Transportation (MnDOT) is proposing construction on Trunk Highway 1/169 Eagles Nest Lake Area Project in rural St. Louis County, in northeastern Minnesota. The project area includes approximately 5.6 miles of Highway 1/169 from just west of the Six Mile Lake Road intersection on the west to approximately 0.1 miles east of Bradach Road on the east. The project includes widening the shoulders, expanding the clear zones, adding turn/bypass lanes and passing lanes, and realignment of portions of the highway.

Consultation Record

On December 11, 2014, MnDOT on behalf of the Federal Highway Administration (FHWA), sent a letter to the U.S. Fish and Wildlife Service (Service) with the following determinations:
Request for Concurrence - May Affect, Not Likely to Adversely Affect Determination - Canada Lynx (*Lynx canadensis*)
Process Agreement - No Jeopardy Determination - Northern long-eared bat (*Myotis septentrionalis*)
No Jeopardy Determination - Rufa red knot (*Calidris canutus rufa*)
No Effect Determination - Piping plover (*Charadrius melodus*)

On December 16, 2014, the Service issued a letter concurring with the May Affect Not Likely to Adversely Affect Determination for the Canada lynx and the process to be followed for the northern long-eared bat.

Changes to Species Protected Under the Endangered Species Act - Since Consultation was Completed

Since the time of this correspondence, the gray wolf (*Canis lupus*) in the western Great Lakes area was relisted as threatened under the Endangered Species Act and critical habitat reestablished. This project will occur within both the distribution range and within designated critical habitat for the gray wolf. MnDOT has made the determination that the above referenced project may affect, but is not likely to adversely affect the gray wolf or result in the adverse modification of designated critical habitat and is seeking concurrence from the Service. Also, MnDOT has updated the previous determination for the Rufa red knot and is making a determination of no effect.

Gray Wolf - Determination Rational

Prey Density

It is not anticipated that the project as proposed will have a detrimental impact in regards to prey density for the gray wolf. The project will not result in added capacity or vehicular speed which would result in a more formidable obstacle for the gray wolf or the prey they depend upon. On the contrary, due to improvements to the roadway geometry and clear zones, the driver response time when encountering a animal on the road will be improved which could be reasonably expected to reduce wildlife vehicle collisions within the corridor.

Increase in Human Density

Approximately two thirds of the project will utilize the existing alignment. Since the proposed project involves maintenance and safety improvements to an existing roadway, the proposed project is not expected to influence development decisions within the project corridor and or region. The current St. Louis County zoning designations indicate that much of the surrounding area is

planned to remain designated as open space/undeveloped with low to moderate potential for scattered rural developments.

Critical Habitat

As stated previously, approximately two thirds of the project will utilize existing alignment, however, the roadway will be relocated in several areas and will result in the removal of several acres of vegetation. In reviewing vegetation impacts in relation to the known species requirements with the Service, it has been determined that the removal of these relatively small linear takings of the boreal forest stands in comparison to the surrounding landscape, would not negatively affect the gray wolf given the extensive range used by this species. For the same reason, the proposed action would not result in the permanent loss or conversion of the boreal forest on a scale proportionate to the large landscape used by gray wolf and would not be considered an adverse modification to designated critical habitat.

Concurrence Request

MnDOT, on behalf of the FHWA, has determined that the proposed action may affect, but is not likely to adversely affect the gray wolf or result in adverse modification of designated critical habitat. MnDOT is requesting concurrence from the Service for this determination.

This email and the Service's response will be included in the administrative record for this project.

Jason Alcott
Minnesota Department of Transportation
Office of Environmental Stewardship
395 John Ireland Boulevard
St. Paul, MN 55155
Phone: 651-366-3605
Email: Jason.alcott@state.mn.us

USFWS RESPONSE RE: WOLF (3/10/2015)



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Twin Cities Field Office
4101 American Blvd E.
Bloomington, Minnesota 55425-1665

March 10, 2015

Mr. Jason Alcott
Natural Resource Specialist
Minnesota Department of Transportation
395 John Ireland Boulevard
St. Paul, Minnesota 55155-1899

RE: Reinitiation of Consultation for Gray Wolf
FWS No. 03E1900-2015-I-0039

Dear Mr. Alcott:

The U.S. Fish and Wildlife Service (Service) received your gray wolf (*Canis lupus*) concurrence request letter dated February 2, 2015, for the proposed Trunk Highway 1/169 Roadway Reconstruction/Realignment Project (Project) for the Federal Highway Administration (FHWA). The Minnesota Department of Transportation (MnDOT), on behalf of FHWA, requested concurrence on its “may affect, not likely to adversely affect” determination for gray wolf and designated gray wolf critical habitat in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). The gray wolf was re-listed as a threatened species under the ESA on December 19, 2014, resulting in the MnDOT’s reinitiation of informal consultation for this Project.

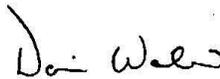
The Service originally provided a letter of concurrence for this Project (Service No. 03E1900-2015-I-0039) on December 11, 2014, covering Canada lynx (*Lynx canadensis*) and designated critical habitat for lynx, and a conference report covering Northern long-eared bat (NLEB; *Myotis septentrionalis*), which is proposed as endangered under the ESA. Parts of that background information were used for this consultation. The proposed action remains the same and will involve widening the shoulders, expanding the clear zones, adding turn/bypass lanes and passing lanes, and realigning portions of the highway along a 5.6-mile action area in St. Louis County, Minnesota.

We concur with your determination that the Project may affect, but is not likely to adversely affect gray wolf or gray wolf critical habitat as described below. Our concurrence is based on Highway 1/169 retaining the same speed limit as the old alignment and the likelihood that the proposed project will not result in increased traffic. In addition, the project footprint impacting approximately 75 acres of trees along a small linear corridor will not result in a substantial loss of forest habitat in comparison to the surrounding landscape. Three miles of the proposed 5.6 miles of reconstruction will occur on, or in close proximity to the existing roadway, reducing impacts to the surrounding habitat. The remaining 2.5-mile segment is proposed to be relocated south of the existing alignment through forested habitat. The abandoned portion of the highway

will be converted to approximately one mile of residential access road and 1.5 miles of designated trail that may be incorporated into the Mesabi Trail. All 2.5 miles will be narrowed and revegetated based on their designated use. While the right-of-way corridor is not being removed completely, the revegetation, limited use, and reduced speed limit are anticipated to benefit the species.

This concludes consultation under Section 7 of the ESA. Please contact the Service if the project changes or new information reveals effects of the proposed action to proposed or listed species or critical habitat to an extent not covered in your biological assessment. If you have questions, please contact Mr. Andrew Horton, Fish and Wildlife Biologist, at 612-725-3548 (extension 2208) or via email at andrew_horton@fws.gov.

Sincerely,



for Peter Fasbender
Field Supervisor

US ARMY CORPS OF ENGINEERS LETTER (3/6/15)



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
180 FIFTH STREET EAST, SUITE 700
ST. PAUL, MN 55101-1678

MAR 06 2015

Operations
Regulatory (2011-01891-LED)

Mr. Michael Kalnbach
Minnesota Dept. of Transportation – District I
1123 Mesaba Avenue
Duluth, Minnesota 55811-2798

Dear Mr. Kalnbach:

We have reviewed the Environmental Assessment and Environmental Assessment Worksheet (EA/EAW) you provided for the Trunk Highway (TH) 1/169 Improvement Project in the Eagles Nest Lake Area, received by the Corps on December 22, 2014. We previously commented on the draft EA on November 26, 2014. We received your summary table of responses to our comments and the USEPA's comments on December 19, 2014. Thank you for responding to our comments. As part of the agreed upon National Environmental Policy Act (NEPA) / Section 404 Clean Water Act (404) informal merger process, we previously concurred with the project's purpose and need, and the array of alternatives and alternatives carried forward (concurrence points one and two, respectively) on September 18, 2014, and the project's preferred alternative (concurrence point three) on November 26, 2014. As a cooperating agency, this letter provides our comments on the EA/EAW.

We agree with the USEPA's comment in their January 30, 2015 letter that all potential sources of surface water quality impacts may not have been identified at this time, as additional drill sampling for sulfides would be completed for the preferred alternative. We understand that the potential sources and mitigation measures for acid rock drainage will be evaluated in more detail during project design to ensure that the project would not result in significant degradation to waters of the United States, and that this information will be coordinated with the Corps and made public on the MnDOT website as it is determined.

In our November 26, 2014 letter, we indicated that in the upcoming Corps permit application, we would expect that impacts to aquatic resources would be split into permanent and temporary impacts, including fill, excavation, clearing, and staging impacts. Please note that we would also expect any lateral effect impacts to aquatic resources resulting from proposed excavation work to be included the permit application. This would include lateral effects resulting from proposed excavation in wetlands or other aquatic resources, along with excavation in uplands that may result in drainage impacts to nearby aquatic resources.

In the EA/EAW, you included information regarding the status of MnDOT's Endangered Species Act coordination with USFWS regarding the northern long-eared bat (NLEB), which is proposed as endangered, and may be listed as endangered on April 2, 2015 by the USFWS. The EA/EAW indicates that USFWS's current primary recommendation to avoid or minimize impacts to the NLEB is to avoid tree clearing during the summer roosting season (April 1 to October 1), but the EA/EAW indicates that winter tree removal is not an option for the project at this time. Also, since the EA/EAW was mailed for comment, the gray wolf has been re-listed as a threatened species in St. Louis County. We understand you gained USFWS concurrence with a "may affect, not likely to adversely affect" determination for the gray wolf on October 14, 2011, though it is possible that consultation may need to be re-initiated for the gray wolf now that it has been re-listed. Please

Operations Division
Regulatory Branch (2011-01891-LED)

continue to keep us updated on the status of the consultation process with USFWS for the NLEB and the gray wolf.

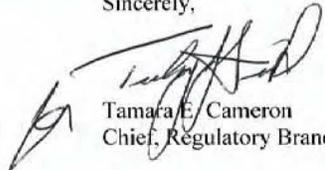
The final concurrence point for the NEPA/404 merger process is concurrence with the design phase impact minimization measures. For this concurrence point, the Corps will evaluate the project's minimization measures to determine if the project has taken measures to avoid and minimize impacts to aquatic resources to the maximum extent practicable, and to determine if the proposed compensatory mitigation would adequately replace aquatic functions that would be lost as a result of the project. Thus, you will need to provide documentation of the aquatic resource avoidance and impact minimization measures that are developed during project design in order to further avoid and minimize impacts to aquatic resources (i.e., beyond the selection of the preferred alternative). In our November 26, 2014 letter, we provided examples of potential measures that should be considered to minimize impacts to aquatic resources, including further alignment shifting; use of existing roadway and uplands for construction staging; use of uplands for stormwater treatment areas; steepening road sideslopes; using broken-back sideslopes; using minimum design standards for lane width, shoulder width, and clear zone width; reducing the elevation of the road profile; construction of bridges or bottomless culverts at stream crossings; and the measures outlined in the USEPA's November 4, 2014 comment letter (see pages 12-13). We understand that this specific minimization information will be developed during project design, and may not be reflected in the initial Corps permit application, which may be based off preliminary, worst-case scenario cross-sections. We look forward to receiving information on the minimization measures used for this project. Please ensure that the documentation of the minimization measures is specific enough to allow us to identify which techniques were used to minimize impacts at specific aquatic resources.

As is typical of a NEPA/404 merger process, if substantial new information regarding alternatives for this project is brought forward at a later time, we may revisit our concurrence that Alternative 3A is the LEDPA. In addition, we anticipate that further avoidance and minimization opportunities of impacts to waters of the United States will be identified as the preferred alternative is further refined in the design phase.

Please send us one hard copy of the final EA/EAW document with the adequacy/FONSI decisions when they are completed.

Thank you for the opportunity to provide comments on the EA/EAW as a cooperating agency. For further information, please contact Sarah Wingert, the Corps MnDOT Liaison, at 651-290-5358 or sarah.e.wingert@usace.army.mil.

Sincerely,



Tamara E. Cameron
Chief, Regulatory Branch

Copy furnished:
Virginia Laszewski – USEPA
Leslie Day – USACE
Jennie Ross – MnDOT
David Dominguez – FHWA

APPENDIX E – Additional and Updated Studies/Memoranda

APPENDIX E1: LIST OF STUDIES RELATED TO ACID ROCK DRAINAGE

APPENDIX E2: GOLDR ASSOCIATES 2015 MEMORANDA

APPENDIX E3: REVISED EA/EAW SECTION V.A.10.A.: GEOLOGY

APPENDIX E4: REVISED EA/EAW ROCK EXCAVATION ESTIMATES

Appendix E1 – List of Studies Related to Acid Rock Drainage

Studies and Analyses Conducted for the Project, incorporated by reference into The Findings of Fact and Conclusions:

Golder Associates Inc. 2011. Technical Memorandum: Evaluation of Potential Impacts Related to Acid Drainage – Eagles Nest Lake Environmental Assessment, MNDOT.

Golder Associates Inc. May 2015. Technical Memorandum: Updated Evaluation of Potential Impacts Related to Acid Drainage – Eagles Nest Lake Environmental Assessment, MNDOT.

Golder Associates Inc. March 2015. Technical Memorandum: Risk Evaluation of the Highway 169 Project.

Martin, Dennis (2011). Review: Sulfur Data and Related Geologic Information for the Hwy. 169 Southern Route Road Construction Project. September 2, 2011.

Severson, M.J. and Heine , J.J. (2010), Geology and Sulfide Content of Archean Rocks Along Two Proposed Highway 169 Relocations to the north of Sixmile Lake, St. Louis County, Northeastern Minnesota: University of Minnesota Duluth, Natural Resources Research Institute, Technical Report NRRI/TR-2010/31. 46p

Severson, M.J. and Heine , J.J. (2012), An Addendum to: Geology and Sulfide Content of Archean Rocks Along Two Proposed Highway 169 Relocations to the north of Sixmile Lake, St. Louis County, Northeastern Minnesota and Geologic Investigations in the Armstrong Lake Area: University of Minnesota Duluth, Natural Resources Research Institute, Technical Report NRRI/TR-2012/20. 83p

Heine , J.J. (2015), A Second Addendum to: Geology and Sulfide Content of Archean Rocks Along Two Proposed Highway 169 Relocations to the north of Sixmile Lake, St. Louis County, Northeastern Minnesota and Geologic Investigations in the Armstrong Lake Area: University of Minnesota Duluth, Natural Resources Research Institute, Technical Report NRRI/TR-2015/12. ##p

Appendix E2 – Golder Associates 2015 Memoranda

Date: March 9, 2015

To: Jennie Ross

From: Rens Verburg

Project No.: 103-81296

Company: Minnesota Department of
Transportation

**RE: UPDATED EVALUATION OF POTENTIAL IMPACTS RELATED TO ACID DRAINAGE
EAGLES NEST LAKE ENVIRONMENTAL ASSESSMENT, MNDOT**

1.0 INTRODUCTION

The Minnesota Department of Transportation (MnDOT) has identified the need for the reconstruction of a portion of Minnesota Highway 169 between the cities of Tower and Ely. In addition to the typical Social, Economic and Environmental (SEE) areas of concern identified in MnDOT's Highway Project Development Process (HPDP), the existence of sulfide minerals in the project area rock has been noted. These sulfide minerals could generate acid drainage runoff when exposed to air and water during highway reconstruction.

An extensive and detailed study of sulfide occurrences was conducted along the proposed highway relocations ("North Route" and "South Route") by staff from the Natural Resources Research Institute (NRRI) of the University of Minnesota Duluth (UMD) (Severson and Heine 2010). This study was reviewed and an opinion was provided as to the potential for generation of acid rock drainage (ARD) (Verburg 2011). In addition, the review provided recommendations for further work.

The findings in the Verburg (2011) review can be summarized as follows:

- The Severson and Heine (2010) effort represents a comprehensive and detailed effort; and is a useful first step towards understanding the nature and distribution of sulfide minerals along the proposed alignment.
- The use of visual sulfide estimates results in uncertainty with respect to actual sulfide concentrations.
- The use of sulfur content alone is typically insufficient for a comprehensive evaluation of ARD potential, since other characteristics, such as buffering potential, sulfide composition, textural relationships, etc. also affect acid formation.
- Based on the information presented in the Severson and Heine (2010) report, it was concluded that the project could not be classified as "low risk" as defined in the guidelines for Best Management Practices related to the prediction, prevention, and mitigation of ARD at road construction developed by the Tennessee Department of Transportation (TDOT 2007), which were used for the initial assessment of ARD risk.
- Additional characterization effort is required to provide a more definitive evaluation of ARD potential.



In June 2011, additional investigation was conducted by NRRI and UMD staff along the proposed alignment and 157 samples were collected for analysis of total sulfur (Severson and Heine 2012). The pertinent findings of this addendum report can be summarized as follows:

- Volcanogenic massive sulfide (VMS) deposits are not present along the alignment.
- Continuous geologic units with consistently high sulfide contents are not present along the alignment.
- Pyrite is the dominant sulfide.
- Sulfides occur mostly in the Soudan Iron-formation and are confined to small areas within bedrock outcrops.
- The total sulfur results for the 157 samples indicate the following:
 - 97 samples (62%) have a total sulfur content <0.02 wt.% (detection limit)
 - 44 samples (28%) have a sulfur content between 0.02 and 0.19 wt.%
 - 12 samples (8%) have a sulfur content between 0.2 and 1.0 wt.%
 - 4 samples (3%) have a sulfur content >1.0 wt.%

In consultation with the Minnesota Department of Natural Resources (DNR), a preliminary threshold of 0.15 wt.% total sulfur was developed for rock with ARD potential (MnDOT and FHA 2014). Relative to this preliminary criterion, the following are a few pertinent findings regarding the distribution of sulfur:

- The average total sulfur content of all 157 samples combined is 0.15 wt.%.
- The average sulfur content of all samples excluding the sample with the highest value (6.3 wt.%) is 0.11 wt.%.
- 138 samples (88%) have a sulfur content < 0.15 wt.% sulfur.

2.0 DISCUSSION

The original 2010 NRRI report and the 2012 addendum represent a very detailed and extensive investigation by two qualified geologists familiar with the local geology and cognizant of the environmental focus of the mapping effort. In all, over 530 outcrops and approximately 45 shallow test pits and trenches (probably dug in the early 1900s) were found and mapped along the proposed alignment, and 157 samples were collected for determination of total sulfur. The procedures used to describe the rocks, record observations, sample, and store data were consistent with standard practices.

The 2011 review (Verburg 2011) identified two issues that might affect the assessment of ARD potential of rock within the project area:

- The use of visual estimates of sulfide content.
- The use of sulfide content alone to make inferences with respect to ARD potential.

The 2011 review also noted that the results from the 2010 investigation conducted by NRRI indicated the Highway 169 project could not be classified as a “low risk” project.

In the following sections, these three issues are re-evaluated based on the newly-available information from the 2011 NRRI investigation.

2.1 The use of visual estimates of sulfide content

A comparison between the visual estimates and the total sulfur analyses for the 157 samples tested indicates that the visual assessments consistently overestimate the actual sulfur content. Therefore, use of visual estimates is inherently conservative (i.e. results in an over-identification of potential 'hot spots') and does not carry the risk of ignoring areas of potential concern.

As indicated by the analytical results, the overall sulfur content along the proposed alignment is low, even more so when considering that the NRRI sampling specifically targeted areas with visual evidence for elevated sulfur. Of the 157 samples collected, 95 were randomly obtained from so-called "generic rock types" while the remaining 62 samples (approximately 40%) were collected from so-called "anomalous sulfide zones" (Severson and Heine 2012). Despite this focus on areas with elevated sulfur, only 12% of the 157 samples contained total sulfur in excess of the preliminary threshold of 0.15 wt.%.

Weathering rinds present on samples were removed prior to submittal to the laboratory. This is standard practice as the analytical results need to represent the fresh, unweathered material. However, in a few cases, it appears this may have caused inadvertent removal of sulfide minerals as well, resulting in total sulfur analyses that were lower than would be expected based on the amount of visually-estimated sulfur present. These discrepancies do not affect the interpretive value of the sulfur data collected to date as the overall spatial patterns and distribution in the project area are well understood. Moreover, any ARD management practices will be informed by visual observation as well as laboratory data, ensuring that material with significant staining will be handled as having an ARD potential.

2.2 The use of sulfide content to make inferences with respect to ARD potential

In Verburg (2011) it was identified that the sulfide content is but one of many characteristics of a rock material that define its ARD potential, and additional characterization effort is typically required to provide a more definitive evaluation. With the availability of total sulfur laboratory results, a more detailed understanding of lithological characteristics, and a better definition of the spatial sulfur distribution from NRRI's 2010 and 2012 addendum reports, it can be concluded that use of total sulfur represents a defensible surrogate for ARD potential for this project. Use of total sulfur is inherently conservative (i.e. this approach results in an over-identification of potential 'hot spots' by not taking into account the presence of non-reactive sulfur species and by disregarding the possible benefits from inherent rock buffering capacity). Therefore, the use of total sulfur does not carry the risk of ignoring areas of potential concern because any occurrence of sulfur minerals above the preliminary threshold of 0.15 wt.% will be deemed capable of generating ARD.

2.3 Risk Classification

Based on the review of results presented in Severson and Heine (2010), the Verburg (2011) review concluded that the Highway 169 project could not be classified as a “low risk” project. This statement was not meant to imply that the project could never be categorized as such, because additional information might become available that would allow for a re-classification. Based on the results of additional work presented in Severson and Heine (2012), it is now considered that the Highway 169 project can indeed be classified as “low risk”. In summary, the reasons for this classification are as follows:

- Based on the available data, the overall sulfur content along the proposed alignment is low to very low, even more so when considering that the NRRI sampling specifically targeted areas with visual evidence for elevated sulfur. Despite this focus on areas with elevated sulfur, only 12% of the samples contained total sulfur in excess of the preliminary threshold of 0.15 wt. %.
- The spatial distribution of sulfur is well-defined and definable. Because of the two detailed visual surveys conducted to date and the thorough understanding of the project geology, it is considered unlikely that significant additional occurrences of elevated sulfur will be encountered during construction. In addition, such occurrences are easily definable due to the visual evidence that presents itself (e.g., discoloration, visual sulfides, “punk” rock (i.e. weathered-out sulfide pits)).
- ARD mitigation measures consistent with industry best practices are readily implementable during construction. Examples of such measures include, but may not be limited to, blending with alkaline amendment and partial or full encapsulation. These measures can be informed by:
 1. Pre-construction targeted drilling and sample collection/analysis (i.e. in areas with elevated sulfur or areas lacking sufficient information)
 2. Construction-phase visual observation
 3. Construction-phase sample collection/analysis

It should be noted that practices which will avoid/minimize ARD generation will also prevent the mobilization of other potentially deleterious constituents originating from sulfide oxidation (e.g., arsenic).

2.4 Till Characteristics

The project area contains till. A geochemical survey of the western Vermillion Greenstone Belt (VGB) (Larson 2004) identified that the composition of the till systematically reflects the composition of the bedrock in the area. Analytical results for 136 samples presented in Larson (2004) indicate that the sulfur content is very low, with a maximum observed value of 0.05 wt.% and an average value of 0.01 wt.%, both well below the preliminary threshold of 0.15 wt.%. Metal and metalloid concentrations are generally low as well, although several till geochemical anomalies were encountered, interpreted to be representative of areas with potential for bedrock mineralization.

The original 2010 NRRI report and the 2012 addendum concluded that VMS deposits were absent along the proposed alignment and make no mention of other types of mineralization. Therefore, it is considered

unlikely that the till in the project area contains elevated concentrations of metals and metalloids. However, should such occurrences be present, metal leaching is not expected to be a concern.

The till represents a weathered material, exposed to oxygen and water. As stated in Larson (2004): "...postglacial weathering easily decomposes coarse, detrital labile mineral species, in particular metal-bearing sulfides." The sulfur analyses indicate that sulfide minerals, which undoubtedly were present in the parent material, have disappeared from the till due to sulfide oxidation occurring during the weathering. This also resulted in the release and mobilization of any associated metals. Those metals that are still present in the till after this mobilization process are thought to be tightly held by the till. Larson (2004) references Shilts (1984), who observed that clay-size phyllosilicates and/or secondary oxides and hydroxides in tills are capable of effective scavenging of metal cations released by weathering. Larson (2004) further mentions that all B-horizon till samples collected in the course of his survey were characterized by a reddish-brown to red color, indicating the presence of abundant secondary (hydr)oxides. Disturbance of the till due to construction activities is, therefore, not expected to materially affect the geochemical stability of any metals in the till, and an increase in metal liberation is thus considered unlikely.

3.0 CONCLUSIONS

Based on the review of the two studies conducted by NRRI, it is concluded that the proposed project represents a "low risk" project from an ARD perspective. Investigative and monitoring actions taking place prior to and during construction will inform a series of best management practices in terms of ARD prevention and mitigation.

GOLDER ASSOCIATES INC.



Rens B. Verburg, Ph.D., P.Geo., LG
Principal and Program Leader Geochemistry

RV/km

4.0 REFERENCES

Larson, P.C. (2004). Regional Till Geochemical Survey of the Western Vermilion Greenstone Belt, Minnesota. NRRI UMD Technical Report NRRI/TR-2004/23

MnDOT and Federal Highway Administration (FHA) (2014). Trunk Highway 1/169 Improvement Project (Eagles Nest Lake Area) Environmental Assessment and Environmental Assessment Worksheet (EA/EAW), Appendix C – Sulfide/Acid Rock Drainage Technical Memorandum.

Severson, M.J. and J.J. Heine. (2010). Geology and Sulfide Content of Archean Rocks Along Two Proposed Highway 169 Relocations to the North of Sixmile Lake, St. Louis County, Northeastern Minnesota: University of Minnesota Duluth, Natural Resources Research Institute, Technical Report NRRI/TR-2010/13.

Severson, M.J. and J.J. Heine. (2012). An Addendum to: Geology and Sulfide Content of Archean Rocks along Two Proposed Highway 169 Relocations to the North of Sixmile Lake, St. Louis County, Northeastern Minnesota, and Geologic Investigations in the Armstrong Lake Area. NRRI UMD Technical Report NRRI/TR-2012/20.

Shilts, W.W. (1984). Till geochemistry in Finland and Canada. *Journal of Geochemical Exploration*, v.21, pp. 95-117.

TDOT, 2007. Guideline for Acid Producing Rock Investigation, Testing, Monitoring and Mitigation. Prepared by Golder Associates Inc., Lakewood, CO.

Verburg, R. (2011). Evaluation of Potential Impacts Related to Acid Drainage – Eagles Nest Lake Environmental Assessment, MnDOT. Golder Associates.



TECHNICAL MEMORANDUM

Date: May 12, 2015
To: Jennie Ross
From: Rens Verburg
RE: RISK EVALUATION OF THE HIGHWAY 169 PROJECT

Project No.: 103-81296
Company: Minnesota Department of Transportation

This document provides the basis for the risk classification of the Highway 169 Project ("Project") as presented in the March 9, 2015 Technical Memorandum "*Updated Evaluation of Potential Impacts Related to Acid Drainage – Eagles Nest Lake Environmental Assessment, MnDOT*" from Dr. Rens Verburg, Golder Associates, to Jennie Ross, MnDOT.

A common definition of "risk" is that it is the product of the consequence and probability of a hazardous event or phenomenon occurring. In the case of environmental risk, "consequence" is often equated with "environmental impact". The "risk" associated with acid rock drainage (ARD) as defined by the Tennessee¹ and Pennsylvania² guidance documents is largely based on the probability of acid production, without explicitly taking into account potential impacts, either unmitigated or mitigated. The probability of acid production is derived from analytical results (in particular from acid base accounting), water quality monitoring, visual indicators (e.g., staining and discoloration, efflorescence, stressed vegetation, etc.), geologic information, the presence of known "pyrite repositories", and historic or existing mining activity. The risk classes identified are as follows:

Tennessee:

- High-Risk = known potential or insufficient information
- Medium-Risk = likely potential
- Low-Risk = minimal to rare potential

Pennsylvania:

- High Acid Bearing Rock (ABR) Risk
- ABR Risk
- No ABR Risk

When the probability of acid generation forms the sole basis for assigning risk, the burden of proof for a "low risk" (TN) or "no risk" (PA) designation is quite high, and requires significant knowledge of the project

¹ TDOT (2007). Guideline for Acid Producing Rock Investigation, Testing, Monitoring and Mitigation.

² PENNDOT (2015). Acid-Bearing Rock.



in question. In the case of Tennessee, insufficient information automatically results in a “high risk” classification.

Based on an initial review of available, qualitative information, it was concluded that the Highway 169 Project could not be classified as a “low risk” one, mainly due to a lack of site-specific knowledge with regard to ARD potential. However, this initial ranking was not meant to imply that the Project could never be categorized as such, because additional information might become available that would allow for a re-classification. Subsequently, based on the results of additional investigation and quantitative testing, the risk classification was reduced to “low”. This “low” classification is not equivalent to the TN ‘low’ classification; however, since it takes into account both the probability of acid production as well as the ability to mitigate impacts. The reasons for this “low risk” classification can be summarized as follows:

- Based on the available data, the overall sulfur content along the proposed alignment is low to very low.
- The spatial distribution of sulfur is well-defined and definable. That is, it was considered unlikely that significant additional occurrences of elevated sulfur would be encountered during construction. In addition, such occurrences are easily definable due to the visual evidence that presents itself (e.g., discoloration, visual sulfides, “punk” rock (i.e., weathered-out sulfide pits)).
- ARD mitigation measures consistent with industry best practices are readily implementable during construction. These measures would be informed by:
 1. Pre-construction targeted drilling and sample collection/analysis (i.e., in areas with elevated sulfur or areas lacking sufficient information)
 2. Construction-phase visual observation
 3. Construction-phase sample collection/analysis

The risk matrix below was used to arrive at the revised risk classification.

		Impact →				
		1	2	3	4	5
Probability ↓		Negligible	Minor	Moderate	Significant	Severe
Almost Certain	(81-100)%	Low Risk	Moderate Risk	High Risk	Extreme Risk	Extreme Risk
Likely	(61-80)%	Minimum Risk	Low Risk	Moderate Risk	High Risk	Extreme Risk
Moderate	(41-60)%	Minimum Risk	Low Risk	Moderate Risk	High Risk	High Risk
Unlikely	(21-40)%	Minimum Risk	Low Risk	Low Risk	Moderate Risk	High Risk
Rare	(1-20)%	Minimum Risk	Minimum Risk	Low Risk	Moderate Risk	High Risk

Based on the available information, it was considered that the probability of ARD generation taking place somewhere along the proposed alignment was “moderate” to “likely”. The resulting impact without

mitigation was considered “negligible” to “moderate” due to the isolated and small occurrences of zones with elevated sulfide minerals. The resulting impact with mitigation was considered “negligible” to “minor” because of the anticipated effectiveness of the mitigation actions in terms of preventing ARD formation.

The combination of the ratings for probability and impact without mitigation resulted in a risk that was “minimum” to “moderate”. In the scenario with mitigation, the resulting risk was “minimum” to “low”.

Although qualitative in nature, based on the risk evaluation it was concluded that the ARD risk for the Project can be described as “low” based on all available information regarding the probability of ARD generation as well as the resulting impacts.

Appendix E3 – Revised EA/EAW Section V.A.10.a: Geology

10. Geology, Soils and Topography/Land Forms

- a. Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.**

Sinkholes, shallow limestone formations, karst features or similar susceptible geologic features have not been identified in the project area.

However, the project is situated within bedrock formations that have been identified to contain sulfide-bearing minerals. In June 2009, during the early planning and design phase of the highway project development process, concerns were raised by area property owners at public meetings and in extensive correspondence with MnDOT staff regarding the potential presence of sulfides in the bedrock within the project area, since the alternatives being considered would require extensive rock excavation. The stakeholders noted that sulfides in the bedrock could potentially weather (i.e., undergo a chemical transformation), resulting in release of acidity that could affect area water resources. Acid rock drainage (ARD) refers to the acidic water that is created when sulfide minerals are exposed to air and water and, through a natural chemical reaction, produce sulfuric acid. ARD has the potential to introduce acidity and dissolved metals into water, which can be harmful to fish and aquatic life.

To better understand the potential for ARD creation in the project area and how the potential for ARD could be minimized/mitigated, MnDOT conducted background research, field data collection and collaborative discussions with regulators Minnesota Pollution Control Agency (MPCA) and Minnesota Department of Natural Resources (MnDNR) and technical experts (Golder Associates, Inc.). A technical memorandum summarizing the research, field work and coordination efforts was prepared by MnDOT (see the *Sulfide/Acid Rock Drainage Technical Memorandum* in Appendix C). The discussion that follows is a summary of the key findings described in the technical memorandum, including: Overview/Background; Research on Current Best Practices; Investigations; Consultation; Potential Project Impacts; and Recommendations.

Overview/Background

The potential for acidity production from sulfide-bearing rock is dependent on a number of factors, including:

- Amount of oxygen present: Sulfide minerals oxidize more quickly where there is more oxygen available. As a result, ARD formation rates are higher where the sulfides are exposed to air than where they are buried under soil or water.¹
- Amount of water available: Cycles of wetting and drying accelerate ARD formation by dissolving and removing oxidation products, leaving a fresh mineral surface for oxidation. In addition, greater volumes of ARD are often produced in wetter areas where there is more water available for reaction.

¹ Source: <http://www.miningfacts.org/Environment/What-is-acid-rock-drainage/>

- Temperature: Pyrite oxidation occurs most quickly at a temperature around 30°C. ⁽¹⁰⁾
- Rock permeability: Dense, impermeable rock is more resistant to weathering since water and oxygen don't easily penetrate the rock.
- Microorganisms present: Some microorganisms are able to accelerate ARD production. ⁽¹⁾
- Type of minerals present: Not all sulfide minerals are oxidized at the same rate, and neutralization by other minerals present may occur, which would slow the production of ARD. ⁽¹⁰⁾
- Inherent buffering capacity of the rock: If the ore/rock is exposed by construction or other activities, it would be less likely to produce ARD if it contains a high proportion of "acid-buffering" minerals such as lime, calcite, carbonate or bicarbonate, which are able to neutralize acidic waters.
- Surface area of sulfide minerals exposed: Increasing the surface area of sulfide minerals exposed to air and water increases sulfide oxidation and ARD formation. ⁽¹⁰⁾

Understanding these rock weathering factors is helpful in assessing the potential risk for ARD and in developing minimization and mitigation strategies for the proposed project, as discussed in the sections that follow. These same basic rock weathering factors also affect the potential risk for release of heavy metals that may also be present in bedrock in this area, which has also been raised as a potential concern by a project stakeholder. The best management practices and mitigation strategies identified to minimize weathering of rock, and the risk of ARD, in the Recommendations section below would also be effective in avoiding/minimizing release of these other elements.

Research on Current Best Practices

In July 2009, MnDOT initiated a consultation process in which resource agencies (primarily Minnesota Department of Natural Resources [MnDNR] and Minnesota Pollution Control Agency [MPCA]) and other professionals (MnDOT staff and consultant team) began to discuss sulfides as a potential concern within the project area. Project information was distributed, including proposed highway alignments and technical reports, and periodic coordination meetings (in-person and phone conferences) have been conducted to evaluate the findings of the geologic investigations (both visual field observations and laboratory testing results), assess the potential for impacts, and advise on how to mitigate potential adverse effects. The issues raised by MnDNR and MPCA through these coordination meetings led MnDOT to research how this potential issue is addressed in other states. State Highway Departments of Transportation (DOTs) in Pennsylvania and Tennessee have encountered sulfide-bearing rock in areas of proposed roadway improvements and as a result, have developed identification, management, and monitoring protocols to address the issue (Virginia and North Carolina also acknowledge the presence of acid producing rock (APR) in their states but, similar to Minnesota, do not have established guidelines for mitigation since APR is rarely encountered on transportation projects). Information was provided by the MnDNR regarding how Pennsylvania and Tennessee DOTs handle potential ARD from sulfides in bedrock.

MnDOT staff has also contacted several representatives at these DOTs to further discuss the topic and their protocols for assessing and managing ARD risks.

Based on the Pennsylvania and Tennessee DOT's experience and protocols, MnDOT used a similar approach for initial assessment of risk, and for defining a process for further characterizing the rock and defining mitigation measures during project final design. In addition, MnDNR Division of Lands and Minerals and MPCA staff involved in mine permitting and review have expertise in sulfide-rock-related issues specific to Minnesota conditions; so these agencies were requested to review MnDOT's findings and provide comments/suggestions as information was compiled and conclusions/recommendations were developed. The following sections describe investigations to date and the planned process for addressing the issue of ARD during project design and construction, including:

- Investigation: Review existing geologic information for the project area and conduct initial field review and sampling to characterize the bedrock within the study area.
- Consultation: Consult with expert advisors at MnDNR, MPCA and mining consultant (Golder Associates, Inc.). Review results of investigations and project plans, to identify potential risks and minimization/mitigation strategies.
- Recommendations: Based on the investigation and consultation findings, summarize the potential risks for ARD and the process for managing the risks on the Eagles Nest project.

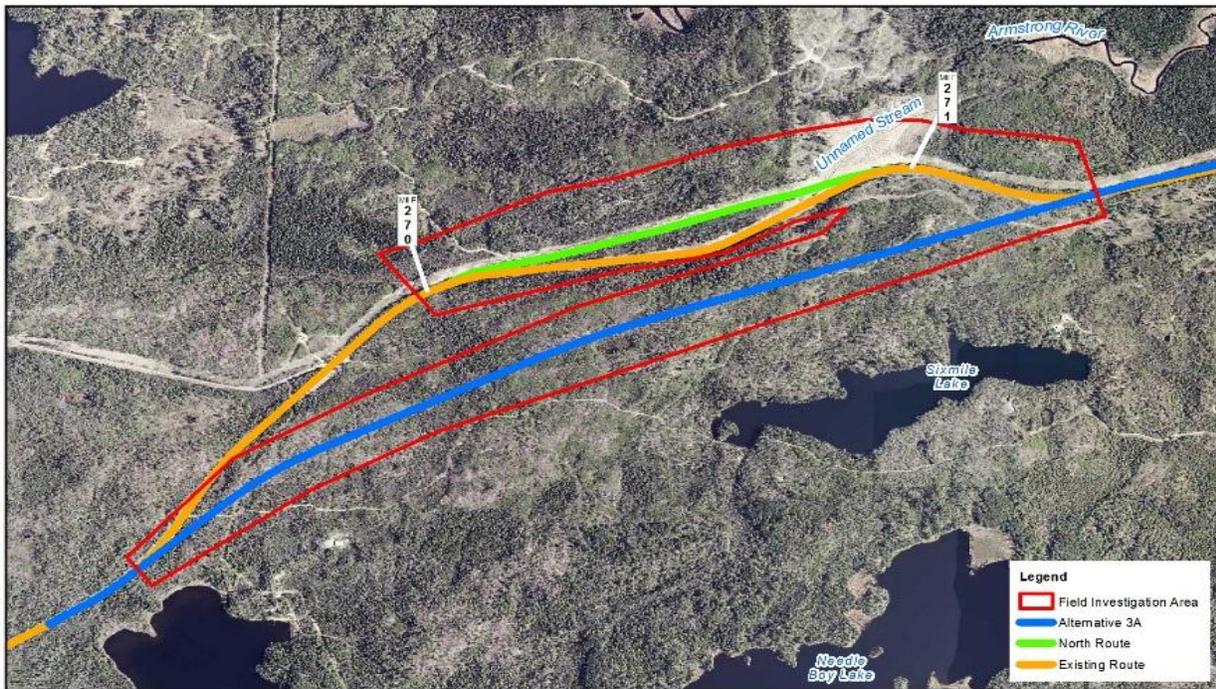
Investigation: Geologic Conditions

The investigation of geologic conditions in the project area, to understand the bedrock characteristics and potential risk for ARD, included three main components:

1. Review of existing mapping of bedrock geology (formations and fault zones), to understand the overall geology of the area.
2. Conduct field surveys at bedrock outcrops within the project area and collect samples. Geologists from the University of Minnesota – Duluth: Natural Resources Research Institute (NRRI), who have conducted numerous other geologic investigations in the project vicinity, conducted the field surveys and sampling.
3. Perform geochemical laboratory testing (sulfur analysis) to verify visual volume sulfide estimates made during field investigations by analyzing mass-percent of total sulfur at a commercial laboratory.

The details of these investigations are provided in the Technical Memorandum (Appendix C). Key findings of the investigations include:

- The initial field investigations were conducted along the re-alignment corridors at the west end of the project, near Sixmile Lake, along the South Corridor, which includes Alternatives 2A and 3A (as well as Alternative 3 dismissed during project screening) , and on the North Corridor (also dismissed during early project screening). See Section III Alternatives for a description of the alternatives development process. The field surveys found that, where present, sulfide in the South Corridor is found mostly in the Soudan Iron Formation Member as secondary pyrite. However, sulfide is generally confined to portions of single bedrock outcrops and commonly restricted to very small areas with sulfide contents ranging from 0.5-5 percent pyrite by visual volume. These small occurrences are referred to as 'anomalous sulfide zones' which occur as isolated 'islands' in a 'sea' of pyrite-barren outcrops. It was also determined that the presence and percentage of sulfide contents (up to 15 percent by volume in some very small locales) increase near fault zones which are found mostly in fill areas on construction profiles along the realignment section of Alternatives 2A and 3A.



Initial Field Investigation Area

- The second field investigation was conducted on the eastern portion of the project corridor (east of Sixmile Lake area), where all of the alternatives being considered are in the same general area, i.e., no substantive re-alignments. Existing geologic information was also reviewed prior to the field investigation and suggested that: 1) bedrock units will be similar to those found during the Sixmile Lake investigation, 2) majority of bedrock excavation will be in iron formation, and 3) only four short sub-areas would likely be affected by bedrock excavation from the proposed highway improvements. Additionally, a review of prior studies and drilling data revealed that the Armstrong Lake/McComber Mine area at the eastern end of the project area would likely contain higher sulfide concentrations than those observed in the Sixmile Lake area (at the western end

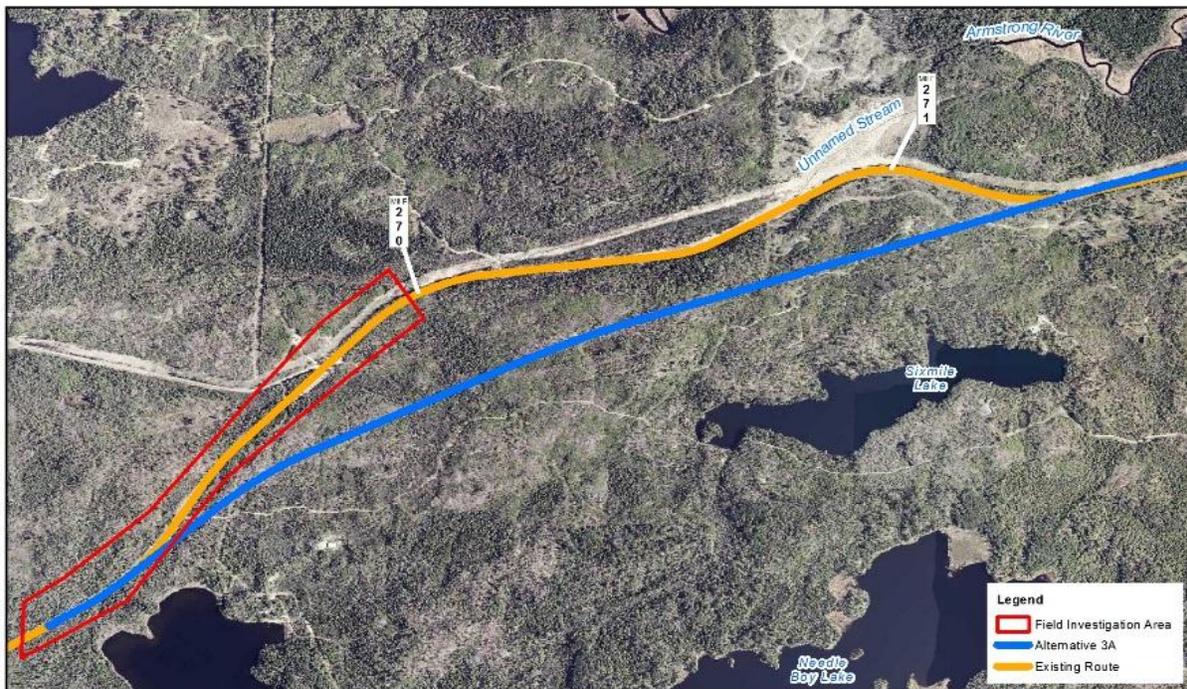
of the project area). Consequently, in addition to the field investigation MnDOT performed bedrock core drilling at three sites adjacent to the McComber Mine to gain preliminary insight into potentially high sulfur concentrations where proposed bedrock excavation was planned.

The investigations revealed that rare to insignificant amounts of pyrite/sulfide by visual volume are present in proposed excavation areas found east of the Sixmile Lake investigation area and west of the Armstrong Lake/McComber Mine area. However, field observations coupled with past and recent drilling information suggests that bedrock excavation performed adjacent to the McComber Mine will likely expose high amounts of primary pyrite (>0.5 percent pyrite by volume found in almost all bedrock exposures; 10 to 15 percent by volume observed in an 8-foot stretch of MnDOT drill core). Though less information was available to assess the stretch of alignment found east of the McComber Mine, it was surmised that pyrite contents could also be substantial. Thus, additional borings were recommended between the McComber Mine area and the eastern project boundary to better define amount and mode of pyrite mineralization prior to bedrock excavations. These borings will be done during project final design, as part of the additional characterization work described in the Recommendations section below.



Second Field Investigation Area

- A third geologic field investigation was performed by NRRI to assess the potential for exposing sulfide bearing rock during bedrock excavation within the alternatives that are within/directly adjacent to the existing Highway 1/169 roadway at the western portion of the project area (i.e., Alternative 1, as well as Alternative 2 that was dismissed during Level 3 screening, as described in Section III – Alternatives), in the vicinity of Sixmile Lake. Field techniques were employed which were similar to those utilized during the prior field investigations. Similar bedrock units were anticipated in the study area given the close proximity to the previous Sixmile Lake area investigation. The final report is pending, but preliminary results of the investigation suggest that: 1) iron formation is the predominant bedrock type found in the investigation area and, 2) visual volume estimates of pyrite/sulfide appear to be slightly higher than those observed in iron formation in the previous Sixmile Lake investigation area along the realignment route. The elevated sulfide presence is likely due to a combination of primary sulfide commonly found near the top of the iron formation member and secondary sulfide found in the vicinity of fault zones. Though outcrop samples were obtained from this stretch for geochemical testing, it is likely that some form of drilling would have been recommended to better characterize the sulfide presence, if Alternative 1 had been selected as the Preferred Alternative.



Third Field Investigation Area

Consultation

As noted previously, due to the complex nature of sulfides in bedrock and associated potential ARD and MnDOT's moderate level of experience with this issue, an ARD expert was consulted for the Highway 1/169 Project. Dr. Rens Verburg (Ph.D., P.Geo., L.G.), a Principal Geochemist with Golder Associates Inc., was added to the review team to assist in the evaluation of project materials (field investigations, current and future sampling and laboratory tests, potential project impacts, and proposed mitigation strategies) and to help facilitate discussions with resource agencies (e.g., MnDNR, MPCA), if needed. Golder Associates and Dr. Verburg are nationally recognized for their work on sulfides and ARD. Golder Associates assisted Tennessee DOT in preparing their guidelines and protocol for investigating, testing, monitoring, and mitigating acid producing rock on highway projects.

To date, Dr. Verburg has reviewed the NRR I reports, field logs, laboratory test results, proposed construction plans, and estimates of bedrock excavations. He has also advised MnDOT on potential mitigation measures (discussed in the Recommendations section below), including reasonable methods for calculating the quantity of buffering agent (limestone) potentially needed to neutralize ARD based on the sulfide percentages from the laboratory test results and the amount of excavated material.

In addition, as noted previously, MnDNR Division of Lands and Minerals and MPCA staff involved in mine permitting and review that have expertise in sulfide-rock-related issues specific to Minnesota conditions were requested to meet with MnDOT staff and/or review MnDOT's findings and to provide comments/suggestions as information was compiled and conclusions/recommendations were developed. The process for further characterizing the rock in the project area and for developing BMPs described in the Recommendations section below resulted from the consultation with MPCA and MnDNR staff.

Potential Project Impacts

Constructing any of the project Build Alternatives would require substantial grading (cut/fill sections) in order to meet highway design safety standards. The estimated bedrock excavation for project alternatives, based on preliminary design layouts, ranges from approximately 145,000 (Alternative 1) to 239,000 (Alternative 2A) to 227,000 (Alternative 3A – Preferred Alternative) cubic yards.

As previously stated, sulfide (pyrite) is present within bedrock in the project area, particularly the Soudan Iron Formation Member. However, visual estimates made during comprehensive field observations and corroborative geochemical laboratory testing by NRR I both suggest that bedrock in the project area generally contains relatively low levels of sulfur. The capacity to mobilize/oxidize sulfide in the excavated material (and rock slopes) along the roadway corridor is heavily dependent on surface area of bedrock that is exposed to weathering. Compared to the high surface areas produced by mining activities (which involve extensive crushing rock into more fine-grained material with high surface area), the bedrock (and rock slopes) exposed by the roadway construction process would have relatively low surface areas, since the rock fill produced by blasting will primarily be large-diameter (+3-inch to +6-inch size) material. In addition, the iron formation rock has very low permeability, which means that water and air would not easily

penetrate the bedrock. Except for pyrite found along the relatively few fracture/joint faces (the 'anomalous sulfide zones' described in the Investigation section above), there would be minimal internal weathering at exposed bedrock faces and within crushed particles.

Recommendations

In November of 2013, MnDOT project staff reviewed the field investigation results and estimated project impacts related to bedrock excavation and rock fill placement with MPCA and MnDNR staff. NRRI's recommendations for areas where additional drilling should be performed to better characterize the rock (described in the Investigation section above) and the practices used by PA and TNDOT's were also reviewed with agency staff. Based on consideration of all of this information, agency staff and MnDOT agreed on a process for defining additional investigations to be performed and for agreeing on BMPs that would avoid/minimize/mitigate the potential production of ARD in the project area. The process that will be followed – which is similar to the process used in other states – includes the following steps:

Perform additional drilling investigations for the Preferred Alternative: Following completion of the environmental review process (i.e., confirmation of the Preferred Alternative), MnDOT will review the project plans with Dr. Verburg and staff from MPCA and MnDNR, to develop a plan (including locations, protocols, etc.) for additional drilling, to better characterize the bedrock characteristics in the Preferred Alternative corridor.

Develop plans and practices to avoid/minimize ARD: Based on the results of the drilling investigation, MnDOT will work with Dr. Verburg and staff from MPCA and MnDNR, to develop a best management practices (BMP) plan for excavating, handling, and use of APR rock, and, if determined to be appropriate, use of limestone or other neutralizing materials to minimize ARD. As discussed in the Sulfide/Acid Rock Drainage Technical Memorandum in Appendix C, examples of practices that are currently being used in other states that may be utilized for this project include:

- Bedrock excavation that employs pre-split blasting methods for bedrock faces to ensure lowest surface area exposure. Discussions with MnDNR personnel indicate that bedrock faces are of less concern than crushed fill (from a surface area standpoint) and, thus, corrective/preventative measures at bedrock faces may not be necessary.
- Crushing rock to +3-inch or +6-inch size thereby creating low available surface areas for potential oxidation within the fill. Crushing to these sizes also produces very few particulates/fine-grained material.
- Encapsulating fill materials applied above the seasonal high water table under the impervious road bed, thereby minimizing direct air and/or water exposure. Limestone rock can also be mixed into bedrock fill material to serve as a buffering/neutralization agent for any potential acid production. Limestone calculations would be made by the third party expert and based on mass percent of sulfur from field samples. The constructive practice for limestone addition has not been determined, though several options are being considered. Any additional sample testing will refine the current limestone calculations.

- Placing rock fill materials below the seasonal high water to keep them submerged, thereby preventing oxidation of sulfur.

Identify if pre- or post-construction monitoring is needed: Discussions with MPCA and MnDNR staff will also include consideration of whether monitoring of excavated bedrock materials and/or surface water chemistry in water bodies in the project areas are needed to characterize the materials encountered during construction and/or whether post-construction water chemistry changes occur. If discussions with agency staff results in a recommendation for monitoring, MnDOT would be responsible for performing and reporting monitoring results.

Public Updates

Because of the level of interest/comment from some project stakeholders regarding the potential for water quality impacts related to rock excavation/ARD, MnDOT will continue to make information available to the public during final design and permitting. For example, as test results become available and as BMP decisions are made as a result of consultation with MnDNR and MPCA staff, the project website will be updated to provide the information to the public.

Conclusions

The project is situated within bedrock formations that have been identified to contain sulfide-bearing minerals that could potentially weather (i.e., undergo a chemical transformation) when rock is excavated for construction of the proposed project, potentially resulting in release of acidity (i.e., acid rock drainage [ARD]) that could affect area water resources. To better understand the potential for ARD creation in the project area and how the potential for ARD could be minimized/mitigated, MnDOT conducted background research, field data collection and collaborative discussions with regulators (MPCA and MnDNR) and technical experts. A technical memorandum summarizing this work was prepared (see the Sulfide/Acid Rock Drainage Technical Memorandum in Appendix C).

This research and collaborative discussions with regulatory agencies resulted in agreement that the risk for ARD generation from the project could be managed by following an agreed-upon process for further investigating and characterizing rock within the preferred alternative alignment, and for defining plans and practices to avoid/minimize and mitigate the potential for ARD (described in detail in the Technical Memorandum) so that there would be no significant impacts to water quality/surface water resources from the proposed project. MnDOT is committed to following this process, including additional collaboration with/concurrence from regulatory agencies and technical experts, which is similar to processes used by other state departments of transportation for managing ARD where sulfide-containing rock occurs. Since the potential risk for ARD generation from rock excavation can be avoided, minimized and mitigated, the differences in rock excavation quantities among project alternatives was not considered to be a key deciding factor in the preferred alternative identification process.

Appendix E4 – Revised EA/EAW Rock Excavation Estimates

REVISED TABLE 1 FROM PUBLISHED EA/EAW

Table 1– Level 2 Alternatives Evaluation Matrix

EVALUATION CRITERIA		No-Build Alternative	Alternative 1 (Minimal Off-Set/ Construct Under Traffic)	Alternative 2 (Remain On Existing And Detour Traffic)	Alternative 3 (Reconstruct with New Alignment)
PRIMARY NEEDS					
Infrastructure Conditions	<i>Ability to Preserve or Enhance Infrastructure</i>	Poor (the existing pavement received a "poor" rating in a 2010 assessment)	Good (with new pavement)	Good (with new pavement)	Good (with new pavement)
Safety Improvements	<i>Ability to Implement Safety Features and Reduce Crashes</i>	Poor (existing narrow shoulders, steep slopes and inadequate clear zones remain)	Good (Enhanced safety features would be included)	Good (Enhanced safety features would be included)	Good (Enhanced safety features would be included)
SECONDARY NEEDS					
Maintain Mobility	<i>Total Length of Passing Zones (NB)</i>	NB = 3,200' (0.6 miles)	NB = 6,100' (1.2 miles)	NB = 5,300' (1.0 miles)	NB = 13,300' (2.5 mi.)
	<i>Total Length of Passing Zones (SB)</i>	SB = 3,400' (0.6 miles)	SB = 6,400' (1.2 miles)	SB = 5,500' (1.1 miles)	SB = 12,600' (2.4 mi.)
	<i>Number of Turn Lanes/Bypass Lanes</i>	2 existing RT Lanes 1 Existing Shoulder Bypass Lane	4 new RT Lanes 1 new Shoulder Bypass Lane	4 new RT Lanes 1 new Shoulder Bypass Lane	4 new RT Lanes 1 new Shoulder Bypass Lane
Geometric Design Deficiencies	<i>Ability to address design deficiencies</i>	No	Yes	Yes	Yes
	<i>Shoulder Widths</i>	4'	8'	8'	8'
	<i>Minimum Design Speed (Horizontal)</i>	55 mph	55 mph	55 mph	60 mph
	<i>Minimum Design Speed (Vertical)</i>	45 mph	55 mph	55 mph	60 mph
SOCIAL, ECONOMIC & ENVIRONMENTAL IMPACTS					
Right-of-way impacts	<i>New Right-of-way Needed</i>	None	35 acres	20 acres	113 acres
Transportation: Maintenance of Traffic ¹	<i>Ability to maintain traffic through the project area during construction</i>	No impacts	No full closure required Low level of traffic disruptions, temporary construction detours likely	Full closure required. High level of traffic disruption, lengthy construction detours.	No full closure required. Low level of traffic disruptions, temporary construction detours likely.
Access to Bear Head Lake State Park	<i>Ability to maintain access to Bear Head Lake State Park via County Road (Cty Rd) 128 during construction</i>	No impact, existing access via Cty Rd 128 will be maintained	Minor impact; temporary detours may affect access via Cty Rd 128.	Major impact; Park access is from Cty Rd 128 via Hwy 1/169. Special constructing staging and detour signage would be required to maintain access from either the east (Ely) or west (Tower).	Minor impact; temporary detours may affect access via Cty Rd 128.
Section 106	<i>Adverse effects on historic properties</i>	No impacts	No impacts	No impacts	No impacts
Section 4(f) Compliance	<i>Section 4(f) impacts</i>	No impacts	No impacts	No impacts	No impacts
Floodplains	<i>Impact to existing floodplains</i>	No Impacts	No designated floodplain identified Armstrong Creek Crossing (new culvert may be needed)	No designated floodplain identified Armstrong Creek Crossing (new culvert may be needed)	No designated floodplain identified Armstrong Creek Crossing (new culvert may be needed)
Hazardous/Contaminated Materials	<i>Contaminated materials impacts</i>	None	No differentiating impacts anticipated – all identified properties are low risk	No differentiating impacts anticipated – all identified properties are low risk	No differentiating impacts anticipated – all identified properties are low risk

¹ Potential detours will depend on final design and construction staging

Blue shading = potentially more important differentiating factors among alternatives

Green shading = other differentiating factors

REVISED TABLE 1 FROM PUBLISHED EA/EAW

(Table 1 Continued)

EVALUATION CRITERIA		No-Build Alternative	Alternative 1 (Minimal Off-Set/ Construct Under Traffic)	Alternative 2 (Remain On Existing And Detour Traffic)	Alternative 3 Reconstruct with New Alignment
Air Quality	<i>Impacts to adjacent receptors</i>	No differentiating impacts anticipated	No differentiating impacts anticipated	No differentiating impacts anticipated	No differentiating impacts anticipated
Noise	<i>Proximity to Noise Receptors</i>	No change in proximity to receptors	Minor changes in proximity to receptors	Minor changes in proximity to receptors	Closer to receptors on Sixmile Lake
Visual Quality	<i>Change in visual environment</i>	No change	Moderate change with several minor realignments from the existing route	Minor change given less realignment from the existing route	More substantial change with new southern alignment.
Bedrock Excavation	<i>Volume of estimated rock removal</i>	None	145,000 cubic yards	127,000 cubic yards	253,000 cubic yards
Earthwork – Excavation	<i>Volume of estimated “cut” material</i>	None	202,000 cubic yards	214,000 cubic yards	163,000 cubic yards
Earthwork - Fill	<i>Volume of estimated “Fill” material</i>	None	670,000 cubic yards	539,000 cubic yards	1,258,000 cubic yards
Upland Forested Vegetation	<i>Estimated acres of clearing</i>	No impacts	48 acres	41 acres	84 acres
Wetlands	<i>Estimated acres of impact</i>	No impacts	13.25 acres (no temporary impacts)	6.59 acres (<1 ac. temp.)	17.27 acres (<1 ac. temp.)
Water Quality	<i>Accommodations to treat runoff and/or seepage from sulfide rock, if required</i>	No accommodations required	Yes	Yes	Yes
Business Impacts	<i>Impact of project on businesses in Tower and Ely</i>	No Impacts	No Impacts	Temporary impacts during construction associated with extended highway closure and lengthy detour routes.	No Impacts
Social/Community	<i>Community Disruption</i>	No impacts	Low Temporary detours would impact trip lengths and travel times between Tower and Ely for residents, school bus movements, and emergency service response	High Extended construction detours for the full project area would severely impact social and economic conditions due to longer trips and increased travel times between Tower and Ely for residents, school buses, and emergency service response.	Low Temporary construction detours would impact trip lengths and travel times between Tower and Ely for residents, school buses, and emergency service response.
	<i>Environmental Justice</i>	No impacts	No impacts anticipated; no populations identified; sparsely populated area	No impacts anticipated; no populations identified; sparsely populated area	No impacts anticipated; no populations identified; sparsely populated area
OTHER CONSIDERATIONS					
Municipal Support	<i>Local government support</i>	Low	Moderate	Low	High
Construction Cost Estimate ^{1/}	2016\$	N/A	\$19,100,000	\$18,500,000	\$21,200,000

1/ Includes estimated costs associated with rock excavation and wetland mitigation activities.

Blue shading = potentially more important differentiating factors among alternatives

Green shading = other differentiating factors

REVISED TABLE 3 FROM PUBLISHED EA/EAW

Table 3 – Level 3 Alternatives: Differentiating Factors

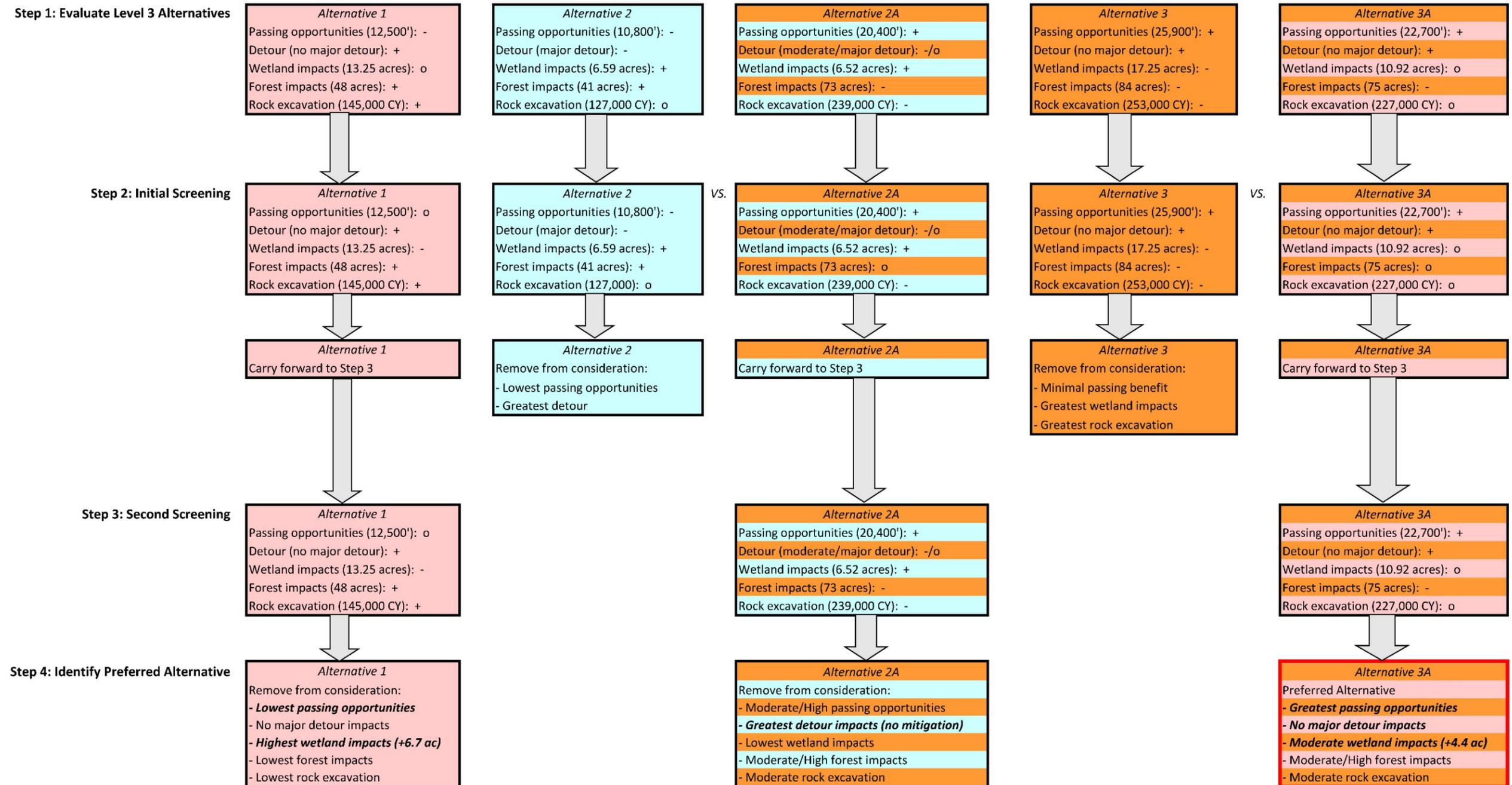
Category	Alternative 1 - Existing Route (Construct Under Traffic)			Alternative 2 - Existing Route (Close Route & Detour Traffic)			Alternative 3 - South Route (Maximize Mobility)			Alternative 2A - Alt. 3 west/Alt. 2 East			Alternative 3A - Alt. 3 west/Alt. 1 East		
	West	East	Total	West	East	Total	West	East	Total	West	East	Total	West	East	Total
Passing Opportunities															
Northbound Lengths (ft.)	3,100'	3,000'	6,100'	3,100'	2,200'	5,300'	8,800'	4,500'	13,300'	8,500' ^{1/}	2,200'	10,700'	8,800'	3,000'	11,800'
Southbound Lengths (ft.)	3,000'	3,400'	6,400'	2,100'	3,400'	5,500'	7,800'	4,800'	12,600'	7,200' ^{1/}	2,500' ^{1/}	9,700'	7,500' ^{1/}	3,400'	10,900'
Wetland Impacts (acres) ^{2/}	6.1 ac.	7.2 ac.	13.3 ac.	3.8 ac.	2.8 ac.	6.6 ac.	3.8 ac.	13.5 ac.	17.3 ac.	3.8 ac.	2.8 ac.	6.6 ac.	3.8 ac.	7.2 ac.	11.0 ac.
Forested Vegetation/Clearing (acres)	21.7 ac.	26.5 ac.	48.2 ac.	17.7 ac.	23.6 ac.	41.3 ac.	48.9 ac.	35.3 ac.	84.2 ac.	48.9 ac.	23.6 ac.	72.5 ac.	48.9 ac.	26.5 ac.	75.4 ac.
Rock Excavation	41,000 CY	104,000 CY	145,000 CY	11,000 CY	116,000 CY	127,000 CY	123,000 CY	130,000 CY	253,000 CY	123,000 CY	116,000 CY	239,000 CY	123,000 CY	104,000 CY	227,000 CY

Notes:

- 1) The Passing Sight Distances vary for Alternatives 2A and 3A compared to the East and West sections of Alternatives 1, 2 and 3 which they are comprised. The differences result from horizontal and vertical alignment adjustments required to link the East and West sections of each hybrid alternative.
- 2) Impact values have been rounded up to single decimal point.
- 3) Cell colors correlate to alignment colors in Figure 9

REVISED FIGURE 10 FROM PUBLISHED EA/EAW

Figure 10 – Evaluation and Screening Sequencing for Level 3 Alternatives



Notes:

- Color shading correlates to the alignment colors on Figure 9.
- Wetland impacts in Step 4 reflect the amount greater than the least impact alternative (Alt. 2A).