DEPARTMENT OF NATURAL RESOURCES

RECORD OF DECISION

In the Matter of the Determination of the Need for an Environmental Impact Statement for the Hawkes Company, Peat Mining – Mercil Site Project in New Maine, Marshall County, Minnesota

FINDINGS OF FACT, CONCLUSIONS, AND ORDER

FINDINGS OF FACT

1. Hawkes Company, Inc. (Hawkes Co.) is proposing to expand its current peat mining activities to a new Site located approximately 1.5 miles southeast of its current operations. Peat mined from this Site would be used as a soil additive for high-quality turf in sporting arenas and golf courses worldwide. The Project site, which is commonly referred to as the Mercil Site (Site), is located in Marshall County, Minnesota.

2. Pursuant to the requirements of Minn. R. 4410.4300, Subp. 12A, the proposed project requires preparation of a State Environmental Assessment Worksheet (EAW) for development of a facility for the extraction or mining of peat that will result in the excavation of 160 or more acres of land during its existence. The Minnesota Department of Natural Resources (DNR) is the Responsible Governmental Unit (RGU) for preparation and review of environmental documents related to the Hawkes Co. project (Project). *See* Minn. R. 4410.0500, Subp. 1.

3. The DNR prepared an EAW for the Project. *See* Minn. R. 4410.1400.

4. The EAW was filed with the Environmental Quality Board (EQB) and a notice of its availability was published in the EQB *Monitor* on May 15, 2017. A copy of the EAW was sent to all persons on the EQB Distribution List, to those persons known by DNR to be interested in the proposed project, and to those persons requesting a copy of the EAW. A press release announcing the availability of the EAW was sent to newspapers, and radio and television stations, statewide. As required by Minnesota Rule, copies of the EAW were also available for public review and inspection at the DNR Central Office library, the DNR Northwest Region Headquarters, the Hennepin County – Minneapolis Central Public Library, the Crookston Public Library, and the Thief River Falls Public Library. The EAW was also made available to the public via posting on the DNR's website. *See* Minn. R. 4410.1500.

5. As required by Minn. R. 4410.1600, the 30-day EAW public review and comment period began May 15, 2017 and ended June 14, 2017. The opportunity was provided to submit written comments on the EAW to the DNR by U.S. Mail, by facsimile, or electronically via email. *Id.*

6. During the 30-day EAW public review and comment period, the DNR received written comments on the EAW from the agencies and individuals listed below:

A) City of Newfolden, Mayor Lori Warne (June 8, 2017)
B) Everson, Deborah (May 16, 2017)
C) Klett, Rob (May 15, 2017)
D) Lubitz, Terry (June 12, 2017)
E) Marshall County Commissioner, Sharon Bring (June 6, 2017)
F) Minnesota Historical Society, Sarah Beimers (June 14, 2017)
G) Minnesota Pollution Control Agency, Karen Kromar (June 13, 2017)
H) Newfolden Coop Oil Management, Ashley McGregor (June 7, 2017)
I) Pederson, Jim (June 12, 2017)
J) Smith, Sara (June 12, 2017)
K) Sucher, Crystal (May 28, 2017)
L) Underdahl Hardware Hank, Greg Underdahl (June 2, 2017)
M) Widseth Smith Nolting, Brian Ross and Joey Goeden (June 14, 2017)

The comment letters are included in the Record of Decision in Attachment A. Discussion of comments received and DNR responses are provided in Finding of Fact ¶ 7 and 8.

7. Comments A, E, H, and L supported the project. These comments did not address the accuracy and completeness of the material contained in the EAW, potential impacts that may warrant further investigation before the project is commenced, or the need for an EIS for the project as required by Minn. R. 4410.1600. Therefore these comments are not receiving a specific response. Copies of all comments will be provided to the Project proposer and to permitting and/or approval entities and/or authorities for their consideration as part of the permitting, approval, and/or implementation processes.

8. Comments submitted that did address the accuracy and completeness of the EAW and/or potential impacts that may warrant further investigation before the project is commenced are summarized below with the DNR's response following each comment.

Commenter B – Everson, Deborah

Comment B: "This is pristine wetland area…What is [sic] the DNR stand for… Department of Natural Resources… once this is destroyed, it can't be fixed or put back. What are you supporting this for? Please hear what the people of Minnesota want, and it's not this."

Response B: EAW items 11b-iv-a and 13d address reclamation concerns with the Site. Hawkes Co. proposes to reclaim the wetland by returning it to a Type 2/Type 3 wetland complex with more open water than is currently present in the wetland. The proposer has cited existing Hawkes Co. reclaimed peat mining sites as examples of successful reclamation. These sites, however, are not comparable to the Site and did not have the same reclamation requirements as this proposed Site would have. Unlike the examples submitted by the Project proposer, this Site is a public water wetland and part of a Wildlife Management Area (WMA). These differences create additional requirements beyond the typical reclamation requirements that were applicable to the existing reclamation examples provided by the proposer. Specifically, under both the Permit to Mine Rules for peat mining and work in public waters rules, the Project

would need to replace affected portions of the WMA and public water wetland with areas of equal or greater public value. *See* Minn. R. 6131.0100, Subp. 3. and Minn. R. 6115.0280, Subp. 4.H.

The EAW identifies that, while the mined wetland Site would be returned to a wetland community, it would not be the same as the existing community. Hawkes Co. submitted a 2013 Rapid Floristic Quality Assessment (FQA) of an existing reclaimed site. The FQA indicates it is unlikely that reclamation of the Site would result in the same native plant community values that exist today. The reclaimed wetland would likely have a different mix of plant species and increased open water, potentially attracting different wildlife species.

Finally, environmental review of the proposed Project is required by Minn. R. Ch. 4100. The purpose of an EAW is to provide agencies with permitting or other regulatory authority with information about the potential environmental impact of a proposed project and to assess whether further environmental review is required for the project. DNR is the designated RGU for the environmental review of this project type, and publication of an EAW by DNR does not signify support of a project. Any permit applications submitted for a project are reviewed and either approved or denied based on laws and rules for the specific regulatory program that a project is subject to. Additional permitting requirements that apply to this Project are noted in the EAW.

Commenter C – Klett, Rob

Comment C: "Peat bogs like this, once lost, can't be replaced. The biodiversity cannot be recovered as it is too complex, and the plan to attempt it by covering the area with what was scraped off the top 15 years earlier isn't an acceptable plan. Also the impact of losing a wetland system will result in reduced water quality indefinitely in the area. I am against projects that cannot demonstrate adequate plans to reestablish what will be lost."

Response C: EAW items 11b-iv-a and 13d address reclamation concerns. See response B. As noted in EAW item 11b-iv-a, the DNR believes it is unlikely that the seedbank and rhizomes would be viable enough after 15 years in a stockpile to effectively revegetate the Site. A September 2003 Fen Restoration Report prepared the University of Minnesota Duluth, Natural Resources Research Institute (Final Fen Report) includes recommendations for fen restoration that include using fresh donor soil rather than stockpiled material.

EAW item 11 also addresses water quality. Hawkes Co.'s preliminary reclamation plan proposes a series of perimeter and field ditches that would divert water from the wetland basin through a sedimentation basin system for settling. Minnesota Rule 6115.0710 B requires that the Project proposer demonstrate that "excess water can be discharged without adversely affecting the public interest in the receiving waters." The Middle River is the receiving water body. Potential environmental effects to the Middle River caused by an increased discharge could include a change in flow regime, which in turn could increase the sediment load from the riverbed or change the timing of flows, which could impact aquatic habitat. The project would be subject to water quality permitting requirements of the Minnesota Pollution Control Agency (MPCA) under the National Pollution Discharge Elimination System and State Disposal System (NPDES/SDS).

Commenter D – Terry Lubitz

Comment D: "I would like to comment on what I have noticed about Hawkes Company near Newfolden, MN. I have found that the Peat Mining has added jobs to the rural community. Also, retail trade to area businesses. The overall presence has been god [sic] to see. Over the years I have enjoyed bring people, including my Grand Children to the area to see the wildlife that makes the site their home. **Many different animals and birds can be found there because of the mining practice**. I have also noticed the care that Hawkes Company uses to restore the sites back after mining. All in all, they have shown to be great steward of Mother Earth. Thank You." [Emphasis in the original.]

Response D: The existing public water wetland, adjacent upland, and the WMA currently provide well developed, quality wildlife habitat for wildlife species associated with rich fens and beach-interbeach settings. During mining operations, existing wildlife habitat would be disturbed and reduced. Wildlife species that are highly mobile would avoid or leave the Site once mining commenced. Once mining is complete, the proposed reclamation would result in a change of wildlife habitat, meaning that some species currently existing on Site would be unlikely to return. Replacement habitat would take time to develop after reclamation and the replacement habitat would not be the rare Prairie Rich Fen that exists in the present condition. Rather, the replacement habitat would be of the type more commonly found in Type 3 and 4 wetlands and would attract a different wildlife composition than those species that currently use the Site. This change in wildlife occurrence and abundance would not be considered an improvement over the existing wildlife use of the wetland and plant communities existing at the Site today. Additionally the change in wildlife at the reclaimed Site would not add to the diversity of wildlife over that which presently exists in this area of northwestern Minnesota – Marshall, Kittson, and Roseau Counties.

Commenter F – Minnesota Historical Society State Historic Preservation Office (SHPO), Sarah Beimers

Comment F: "We have reviewed the Environmental Assessment Worksheet that was prepared for this project. Because this project is located within an area that has the potential to contain archaeological sites and because there are no current methods that provide a means for archaeological survey in wetlands, we recommend that the Minnesota Department of Natural Resources prepare an Unanticipated Discoveries Plan (UDP) so that the mining operators have a protocol to follow in the event that human remains or artifacts are discovered during mining operations. The UDP should include a section that describes the types of material remains that may be found during peat mining operations, a section laying out the protocol for mining personnel in the event that human remains or archaeological resources are encountered, and a list of people to contact in the case of a discovery. For your information we have included a UDP that was prepared for a different type of project here in Minnesota. We thought this might be helpful, particularly Section II through Section V of the document."

Response F: EAW item 14 addresses historic properties. There are no known historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the Site. During a follow up conversation with David Mather, National Historic Register Archaeologist with the State Historic Preservation Office, Mr. Mather stated that challenges such as difficult

excavation and limited access make surveying wetlands prohibitive. He cited examples of artifacts being found when wetlands are disturbed, hence SHPO's precautionary recommendation for a UDP. The DNR acknowledges this precautionary recommendation. This recommendation and example UDP will be provided to the Project proposer and to permitting and/or approval entities and/or authorities for their consideration as part of further decisions about whether to permit, approve, and/or implement the Project.

Commenter G – Minnesota Pollution Control Agency (MPCA), Karen Kromar

Comment G: "As stated in the EAW, the Hawkes Company mining operations will be subject to the state noise standards. As such, Hawkes Company should ensure that the mining equipment is fitted with the appropriate mufflers during operation. Please also note that the determination of the noise area classification (NAC) under state law is based on where the receptor of a noise is located, regardless of any zoning or other municipal laws; thus, although residences may seem far away, they would be considered NAC1 areas in the case of a complaint. For questions regarding noise standards, please contact Christine Steinwand at 651-757-2327."

Response G: EAW Item 17 acknowledges that the project would consist of intermittent noise associated with peat mining vehicles and recognizes that noise from peat mining would adversely impact wildlife nearby. The increased noise level is anticipated to be similar to that of farming operations. The nearest sensitive receptors are residences (NAC1) approximately 1,200 feet away from the mining Site. Accounting for noise attenuation, mining operations at this distance are not anticipated to exceed day or nighttime state noise standards at these residences. Nevertheless, MPCA's comment will be forwarded to the proposer so the company is aware.

Commenter – Jim Pederson

Comment I: "I am writing this in support of Hawkes Company's proposal to mine peat at the Mercil Site in Marshall County. As a retired Biology teacher, I have been impressed by Hawkes Company's efforts to protect and enhance the natural environment at their current site near the Mercil site. **I have visited their present site on numerus occasions and have enjoyed viewing an abundance of wildlife, including ducks, geese, swans, herons, turkeys, der [sic], and black bears. Their restoration efforts and mining practices appear to benefit all these species**. Because of their past work and care for the environment at this site, I am confident that similar procedures will be taken at the proposed Mercil Site." [Emphasis in the original.]

Response I: The existing public water wetland, adjacent upland, and the WMA currently provide well developed, quality wildlife habitat for wildlife species associated with rich fens and beach-interbeach settings. During mining operations, existing wildlife habitat would be disturbed and reduced. Wildlife species that are highly mobile would avoid or leave the Site once mining commenced. Once mining is complete, the proposed reclamation would result in a change of wildlife habitat, meaning that some species currently existing on Site would be unlikely to return. Replacement habitat would take time to develop after reclamation and the replacement habitat would not be the rare Prairie Rich Fen that exists in the present condition. Rather, the replacement habitat would be of the type more commonly found in Type 3 and 4 wetlands and would attract a different wildlife composition than those species that currently use the Site. This

change in wildlife occurrence and abundance would not be considered an improvement over the existing wildlife use of the wetland and plant communities existing at the Site today. Additionally the change in wildlife at the reclaimed Site would not add to the diversity of wildlife over that which presently exists in this area of northwestern Minnesota – Marshall, Kittson, and Roseau Counties.

Commenter J – Sara Smith

Comment J: "My one concern with the land is the loss of wooded/forest, going from 54 acres to 30. As this land is tied to the State Wildlife land, I would like if they increased the Wooded/ Forest land, rather than increase the Brush/Grassland. Planting several trees at the completion of the project would assist with this."

Response J: Implementation of the proposed Project would result in the loss of approximately twenty-four (24) acres in wooded/forest cover type. The project proposer did not identify any mitigation or reclamation measures to replace this cover type. It is possible that, after reclamation, the upland sites would eventually regrow a wooded/forest plant community. Detailed reclamation plans would be required as part of the permit to mine application. The reforestation recommendation for replanting trees will be provided to the project proposer and permitting entities for their consideration in developing and considering detailed reclamation plans.

Commenter K- Sucher, Crystal

Comment K: "My main concern is with the impacts to the habitat. There were a few points noted in the environmental assessment that I found especially disturbing. First, is the fact that the proposed site is an area classified as a "Site of High Biodiversity Significance" (pg 18). Combine that fact with the inability to reclaim the area after mining as a Prairie Rich Fen plant community, and the result would be a devastating loss of needed biodiversity in Northern Minnesota."

"Another negative impact could be to the groundwater. Per the MN DNR's website information of groundwater provinces, Marshall County only has moderately available groundwater. The environmental assessment noted that the "site-specific groundwater flow and aquifer connectivity is not known" (pg 10). The mining of peat in this area could have unexpected and severe repercussions to the local groundwater."

Response K: The EAW acknowledges the potential impact to the Site of High Biodiversity Significance and the inability to return the Site to a Prairie Rich Fen. Although the Project would result in these impacts, any permit to mine and/or work in public waters would require mitigation of equal or greater public value (Minn. R. 6131.0100, Subp. 3; Minn. R. 6115.0280, Subp. 4.H.). The purpose of this requirement is to permit mining/development to occur while assuring that the public values these wetlands provide are replaced.

Commenter M - Widseth, Smith, Nolting, Joey Goeden and Brian Ross

Comment M1: "**Item 11-b-ii. Stormwater** It should be noted that all stormwater from the site is designed to go through the sedimentation basins prior to being discharged."

Response M1: The information provided by the commenter is inconsistent with the data submittal provided by the applicant to the DNR. EAW Figure 6 shows the portion of the Site that would have stormwater discharged into the sedimentation basins. Figure 6 indicates that substantial portions of the new and upgraded access roads are not proposed to drain to the sedimentation basins.

Comment M2: "**Item 11-b-iv-a. Wetlands** DNR indicates 'the site would not likely be reclaimed to a Prairie Rich Fen plant community'; this is, however, not true, as Hawkes Company has provided evidence that their reclaimed mine Site 2 has returned to a Prairie Rich Fen plant community."

Response M2: The EAW item 11-b-iv-a does acknowledge that Hawkes Co. provided Site 2 as an example of existing reclaimed peat mining operation. However, the "Walton, G. 2013. Rapid Floristic Quality Analysis of Site 2 and Hawkes Peat Wetland Mitigation Assessment" (2013 Walton Report Assessment) does not support Hawkes Co.'s claim that Site 2 has returned to a Prairie Rich Fen.

Restoration goals for Site 2, a 40-acre former peat mine area, were aimed at establishing a sedge mat. In 2013, thirteen years after restoration began, Site 2 consisted of four plant communities: sedge mat, shallow marsh, shrub carr, and fresh meadow. Only 10% of Site 2 was considered sedge mat and is the only one of the Site 2 communities that is comparable to Prairie Rich Fen.

Based on the Biological Condition Gradient (BCG) ranks, the remaining 90% of Site 2 consists of communities that are not functionally or floristically high quality sedge mats. This is largely due to hydrological changes at Site 2, including increased standing water in the shallow marsh and dry or intermittently saturated soils in the fresh meadow. Reed canary grass, a non-native invasive species, was observed over a large part of Site 2 in 2010 and 2013. At about 60% cover, this invasive species was the dominant species in the fresh meadow. During these years, it was also noted that some areas had very dry soils and were no longer fully vegetated.

By one measure, the BCG ranks, the sedge mat was comparable to the Prairie Rich Fen at the Site. However, the species richness of the Site 2 sedge mat was low and the hydrology was compromised by a nearby drainage ditch. In addition, given that the sedge mat at Site 2 covers only 10% of the total area, it is vulnerable to colonization by invasive species and susceptible to any changes in hydrology. Thus, while a small portion of Site 2 may have met the minimum restoration goals, overall Site 2 has not. Therefore, Site 2 is not a good example of successfully restoring a site to pre-project conditions.

Comment M3: "A Prairie Rich Fen, as defined by the DNR, is: Open graminoid-dominated peatlands in glacial lake plains and broad glacial drainageways in the prairie region. Dominated by fine-leaved sedges and grasses, with low shrubs absent to common."

Response M3: The *DNR 2005 Field Guide to the Native Plant Communities of Minnesota: The Prairie Parkland and Tallgrass Aspen Parklands Provinces (Field Guide)*, does include this brief general description of a Prairie Rich Fen, but this description is abstracted from more detailed information contained in the publication. It is not a definition and this description alone is not

sufficient to identify a Prairie Rich Fen. The native plant community classification in the *Field Guide* is driven by plant species composition. In order to classify a native plant community, it is necessary to follow the keys that are included in the *Field Guide*.

Comment M4: "Site 2 has been restored to a Prairie Rich Fen, as indicated in a Floristic Quality Analysis (FQA) report and other information provided to the DNR. Site 2 may not have exactly all the same species as the Mercil site, but it certainly meets DNR's definition of a Prairie Rich Fen and so will much of the restored Mercil site."

Response M4: See responses M2 and M3.

Comment M5: "DNR's assessment of Hawkes Company's Minnesota Routine Analysis Method (MnRAM) analysis was inaccurate. To help determine if the reclaimed Mercil Site would have equal or greater public value as existing conditions, WSN staff completed a MnRAM analysis."

Response M5: EAW item 11-b-iv did briefly mention the MnRAM and states that DNR did identify issues with the use of Hawkes Co.'s MnRAM analysis. The Widseth, Smith, Nolting comments submitted on the MnRAM are based on a technical memorandum dated May 11, 2017, rather than the EAW itself. However, DNR's response to the specific assertions by the commenter are addressed below.

Comment M5a: "There is not an existing program or software available that is perfect for determining the value of reclaimed wetlands. The MnRAM program has been through extensive scientific review by wetland regulatory agencies to make it the best it can be. WSN utilized information provided from previous Hawkes Co. reclamation sites to help determine the likely outcome of reclamation at the Mercil site. DNR's comments on the Hawkes MnRAM analysis are overly critical and DNR has provided no other method to quantity [sic] the public values of wetlands. MnRAM is the state-of-the-art. Our specific concerns regarding DNR's comments on the MnRAM analysis are provided below."

Response M5a: DNR does not question the value of MnRAM when used appropriately; however, as stated in the EAW, the Minnesota Board of Water and Soil Resource's comprehensive guidance for MnRAM cautions against drawing conclusions when comparing two different types of wetlands. Minnesota Board of Water and Soil Resources, *Comprehensive General Guidance for Minnesota Routine Assessment Method (MnRAM) Evaluating Wetland Function, Version 3.4(beta)* at 4 (September 15, 2010)(*MnRAM Guidance).* The guidance states, "Great care is advised when drawing conclusions from apples to oranges comparisons. The greater the disparity between wetland plant community types, the less valid the comparison becomes. Comparing the functional levels of, for example, a precipitation-driven bog versus a floodplain forest is of little utility." *MnRAM Guidance* at 4.

The DNR replied to the proposer's use of the MnRAM and suggested another method in a technical memorandum, dated May 11, 2017 as follows: An <u>appropriate use of MnRAM, or other assessment methods, such as the Floristic Quality Assessment,</u> would be to compare the Site with other rich fen communities that may comprise part of a compensatory mitigation package, or as part of an analysis of alternative mining sites. For the Site, the primary concern of

the DNR is the potential loss or conversion of the existing high quality native plant community (MnRAM rating of "Exceptional") to a plant community warranting a lesser rating.

Comment M5b: "Creating different types of wetland within the Mercil Site will increase the value of the wetland. Proposed reclamation would create a more diverse wetland area. Wetland reclamation would result in a mix of Type 3 Shallow Marsh and Type 4 Deep Marsh wetland. The deeper water habitat would be ideal for waterfowl, shoreland birds, wading birds, amphibians, mink, muskrat, beaver, etc. A greater variety of wildlife has been observed by WSN staff on the Hawkes Co. reclamation sites compared to the natural peatlands (see Photographs in Appendix A showing wildlife viewed within previously reclaimed wetland areas). Native wetland vegetation, including existing sedges would reestablish within the reclamation site. The wetland reclamation will improve wildlife habitat, create more wildlife viewing opportunities, allow for greater native wetland vegetation diversity and create a more diverse wetland area, therefore; achieving equal or greater public value."

Response M5b: Converting an intact Prairie Rich Fen into a degraded open water wetland would not achieve an equal or greater public value. All of the Site wetland types are rated as floristically high quality. Some non-native species are present but are not common at the Site. The plant lists provided by Hawkes Co. for previously reclaimed sites demonstrate the reclaimed sites are characterized by the dominance of more common wetland plant species and invasive plant species. A greater variety of plant species does not necessarily equate to an improvement.

The existing public water wetland, adjacent upland, and the WMA currently provide well developed, quality wildlife habitat for wildlife species associated with rich fens and beach-interbeach settings. During mining operations, existing wildlife habitat would be disturbed and reduced. Wildlife species that are highly mobile would avoid or leave the Site once mining commenced. Once mining is complete, the proposed reclamation would result in a change of wildlife habitat, meaning that some species currently existing on Site would be unlikely to return. Replacement habitat would take time to develop after reclamation and the replacement habitat would not be the rare Prairie Rich Fen that exists in the present condition. Rather, the replacement habitat would be of the type more commonly found in Type 3 and 4 wetlands and would attract a different wildlife composition than those species that currently use the Site. This change in wildlife occurrence and abundance would not be considered an improvement over the existing wildlife use of the wetland and plant communities existing at the Site today. Additionally the change in wildlife at the reclaimed Site would not add to the diversity of wildlife over that which presently exists in this area of northwestern Minnesota – Marshall, Kittson, and Roseau Counties.

Comment M5c: **Wetland Classification: "**The Mercil Site and surrounding areas are currently dominated by OPp91b Prairie Rich Fen (Peatland class). The Mercil Site immediately after mining will most likely develop in a similar fashion to Hawkes Company Sites 2 and 4, quickly having areas of sedge mat and wet meadow which meet the characteristics of an OPp91a Prairie Rich Fen (Mineral Soil class). Restoration in the near term (10-100 years) will produce much Prairie Rich Fen that achieves reclamation goals for the project. Whether or not the entire Mercil Site develops into an OPp91b site and whether the existing OPp91b would survive at this location in the future is highly dependent on changes in regional climate over the next century."

Response M5c: As set forth in Response M2, establishing a sedge mat on 10% of Site 2 after thirteen years of reclamation does not support the contention that reclamation of the Site would produce a Prairie Rich Fen in the near term that meets the restoration goal of replacing the Prairie Rich Fen with a wetland of equal or greater public value. Similarly, the restored Site 4 is dominated by several non-native grasses and forbs. The hydrology of Site 4 is poor and reed canary grass dominates at least 33% of the site. Wetland hydrology is present in a shallow ditch that runs through Site 4 and the site is dominated by a newly developed marsh. Outside of the ditch, much of the soil is dry or only moist. The 2013 Walton Assessment states that the hydrology of this site will not be sufficient in the long-term to re-establish a sedge mat (comparable to Prairie Rich Fen).

Comment M5d: **Soils: "**The reclaimed soils will be a hydric soil similar to soils on many Prairie Rich Fens. No studies are available to show the long-term potential for peat accumulation after reclamation is completed. We believe that the reclaimed Mercil Site will become dominated by sedges over time and will continue to accumulate peat similar to existing conditions."

Response M5d: The literature on restoring sedge peat is very limited. The literature does tell us, however, that it can be very difficult to establish fen plant communities after mining is complete. There is no evidence to suggest the Site would or could be reclaimed to Prairie Rich Fen conditions such as currently exists at the Site.

Comment M5e: **Vegetative Communities: "**The reclamation plan for the Mercil Site will follow the same general structure as was used for Combined Reclamation Plan for Sites 1 and 6. At Sites 2 and 4, an OPp91a Prairie Rich Fen was successfully restored as documented in the FQA of Mercil Site and Hawkes Peat Wetland Mitigation provided with the draft EAW submitted in 2014. Hawkes is also having recent success at Sites 1 and 6 that were reclaimed in 2015. Although Sites 1 and 6 have only been reclaimed for two years, the vegetation is coming back as evidenced by recent monitoring of the Sites. It was noted during a site visit completed by WSN staff on June 9, 2017 that sedges and rushes are becoming more dominant within Hawkes Co. Sites 1 and 6. In time, sedges and rushes will outcompete the invasive reed canary grass and restore more native wetland vegetation."

Response M5e: The reclamation plan for Sites 1 and 6 would not be sufficient to achieve the "equal or greater public value" mitigation requirement that applies to the proposed project. In addition, a field visit to Site 1 in August 2017 by DNR staff indicated that Site 1 is approximately 2/3 reed canary grass and 1/3 cattails, with a small number of desirable plants, such as sedges and rushes, interspersed. The condition of Site 6 as described by Hawkes Co. has not been recently inspected so reported conditions cannot be confirmed. Restoration examples Sites 2 and 4 are not sufficient examples of restoration of a Prairie Rich Fen. After 13 years of restoration on Site 2, sedge mat (comparable to Prairie Rich Fen) covers only 10% of the site; a large portion of it is dominated by reed canary grass. The restored Site 4 is dominated by several non-native grasses and forbs. The hydrology of Site 4 is poor and reed canary grass dominates at least 33% of the site. Wetland hydrology is present in a shallow ditch that runs through Site 4 and the site is dominated by a newly developed marsh. Outside of the ditch, much of the soil is dry or only moist. The 2013 Walton Assessment states that the hydrology of this site will not be sufficient in the long-term to re-establish a sedge mat (Prairie Rich Fen).

Comment M5f: "Based on the [2013 Walton Assessment], the reclaimed wetland areas have a greater variety of native wetland plant species. A greater amount of native wetland plant species growing within the reclaimed Mercil Site will increase the vegetative value on the site. It is not possible to predict all the vegetation that will be present once reclamation is complete, but based on previous reclamations, the Mercil Site should have Exceptional public value for vegetative communities."

Response M5f: The 2013 Walton Assessment and the 2010 plant list both document a greater variety of common wetland plants and invasive species at the reclaimed sites. While this does document a greater variety of plant species, it does not demonstrate that the increased numbers of common and invasive plant species would warrant an exceptional public value for the vegetative communities at the restoration Site, especially as compared to the high quality Prairie Rich Fen plant community that currently exists at the Site.

Comment M5g: **Hydrologic Regime: "**Site grading and outlet controls, as part of the reclamation, will recreate the existing depth of water needed for hydrological stability. Shallow groundwater recharge from off-site, combined with retention of precipitation through outlet control, will provide conditions suitable for plant communities to recover from the seed bank. After restoration of the hydrology, the site should follow a similar recovery trajectory to Hawkes Company Site 2. Furthermore, a deep peat layer is not required to support a sedge mat, as seen at Sites 2 and 4 and in the many other Prairie Rich Fen (Mineral Soil class) communities in northwest Minnesota. In fact, the root structure of the vegetation is only 4 to 5 inches thick, so the deeper peat is not needed for the vegetation to grow."

Response M5g: Details on site reclamation including grading and outlet controls have not been provided to the DNR. Additionally, there is no site-specific surface or groundwater information available for the Site to understand the existing condition and be able to predict how the hydrology may change during mining or during reclamation.

Comment M5h: **Downstream Water Quality: "**The Mercil Site will have plant communities that will provide nutrient uptake in its reclaimed condition. The Type 3 portion of the reclaimed site will remain densely vegetated, providing nutrient uptake. The Type 4 portion of the reclaimed site will provide surface water storage which will allow for evaporation, therefore; reducing the amount of water flowing downstream. The Type 4 portion of the reclamation site will also contain vegetation that will assist with nutrient uptake."

Response M5h: It is acknowledged that plant species that establish as part of reclamation would provide nutrient uptake. This nutrient uptake would not result in improved water quality relative to what is currently provided by the Prairie Rich Fen at the Site.

Comment M5i: **Wildlife Habitat: "**Portions of the Mercil Site after reclamation is completed will consist of areas of sedge mat, which will provide habitat for the Yellow Rail and Nelson's Sparrow, although no known sightings of the Yellow Rail or Nelson's Sparrow have occurred within the Mercil Site. More diverse habitat with the Type 3 and 4 wetlands within the reclaimed site will increase the value for Wildlife Habitat Structure.

Based on onsite observations from WSN staff, the previously reclaimed Hawkes Co. mining sites attract many different wildlife species such as sandhill cranes, Canada geese, a variety of ducks, amphibians, etc. Natural predators such as eagles, owls, hawks and falcons are likely present within and surrounding the Mercil Site currently and will likely increase due to an increase in prey species. Type 3, 4, and 5 wetlands are protected under Minnesota Law as public water wetlands because they are more valuable than other wetland types, largely because these Type 3, 4, and 5 wetlands have more wildlife and are more valued by the public."

Response M5i The existing public water wetland, adjacent upland, and the WMA currently provide well developed, quality wildlife habitat for wildlife species associated with rich fens and beach-interbeach settings. During mining operations, existing wildlife habitat would be disturbed and reduced. Wildlife species that are highly mobile would avoid or leave the Site once mining commenced. Once mining is complete, the proposed reclamation would result in a change of wildlife habitat, meaning that some species currently existing on Site would be unlikely to return. Replacement habitat would take time to develop after reclamation and the replacement habitat would not be the rare Prairie Rich Fen that exists in the present condition. Rather, the replacement habitat would be of the type more commonly found in Type 3 and 4 wetlands and would attract a different wildlife composition than those species that currently use the Site. This change in wildlife occurrence and abundance would not be considered an improvement over the existing wildlife use of the wetland and plant communities existing at the Site today. Additionally the change in wildlife at the reclaimed Site would not add to the diversity of wildlife over that which presently exists in this area of northwestern Minnesota – Marshall, Kittson, and Roseau Counties.

Comment M5j: **Amphibian Habitat: "**Based on visual observations from WSN staff during the 2016 growing season, Hawkes Company's previously reclaimed mining sites had standing water within portion of the site throughout the entire growing season. The extended hydroperiod in the reclaimed sites provide amphibian habitat for longer durations; therefore, increasing amphibian habitat conditions."

Response M5j: An extended hydroperiod is not the only factor used to determine the benefits of Site alteration to amphibian habitat. Deeper water may benefit some species, but not others. DNR wildlife biologists have reviewed information regarding the post reclamation condition of the sites used as successful reclamation examples and they did not find this conversion to a deep marsh would provide more beneficial habitat for amphibians, compared to the existing Site.

Comment M5k: **Aesthetics/Recreation/ Education/Cultural: "**While the Mercil Site currently provides scientific and educational opportunities due to its predominately undisturbed condition of the site, there are many other nearby Prairie Rich Fens that can provide adequate scientific and educational opportunities. Under MnRAM, the Mercil Site ranked higher in reclaimed condition because the more diverse wetland will attract additional wildlife, therefore; increasing the recreational value and aesthetics. The Mercil Site will be more visible due to trails and tree clearing around the site. Due to the increase in vegetative diversity and wildlife diversity, we believe the Mercil Site would be valuable for scientific and educational uses in reclaimed condition.

Response M5k: The presence of other scientific and educational opportunities at sites not included in a MnRAM assessment has no bearing on the MnRAM assessment of this wetland function. The DNR technical memorandum in response to the Hawkes Co.'s MnRAM analysis identified that the rating of the aesthetics/recreation/education/cultural function for the reclaimed Site appeared not to consider the loss of a rare wetland. The loss of this rare wetland plant community would reduce the educational and cultural function of the wetland. It is not apparent that increased access to a disturbed wetland with more common wetland species and open water would warrant the same functional rating as a wetland with this rare plant community.

Comment M5l: **MnRAM Summary: "**MnRAM is the *defacto* method to determine wetland values in Minnesota. We stand by the statement that the Hawkes MnRAM analysis showed equal or higher public value for the reclaimed Mercil site. It is unclear why DNR discouraged a MnRAM analysis and discounted the Hawkes Co. analysis. It as it is the standard and turnkey tool used by Minnesota wetland regulators to assess public values of wetlands."

Response M5l: The basis for DNR's concern about the use of MnRAM in this instance is provided in a May 11, 2017 memorandum that describes DNR technical review of the Hawkes Co. MnRAM analysis. The MnRAM report prepared by Hawkes Co. includes results that cannot be supported by DNR technical reviewers due to several reasons, including: the inappropriate application of the MnRAM tool, use of inappropriate underlying assumptions in the reclaimed wetland assessment, and statements unsupported by adequate evidence in the "Functional Ratings" section of the assessment.

Comment M6: **Item 13b. Species of Special Concern. "**The MDNR has noted in the EAW that there are three plant species of state special concern found within Marshall County MBS Site 71. These species include blunt sedge (*Carex obtusata*), northern androsace (*Androsace septentrionalis*), and McCalls's willow (*Salix macalliana*). The blunt sedge and northern androsace are found on sand ridges. The sand ridges within and adjacent to the Mercil Site will be mostly undisturbed by the proposed project. The McCall's willow would likely be found within the predominately Prairie Rich Fen (mineral soils class) outside of the proposed mining area. Furthermore, the FQA did not find the McCall's willow in the shrub carrs on the Mercil site, but found several other more common willow species. DNR has indicated the exact location of previously located species of special concern is not known. Hawkes Co. has agreed to avoid any species of special concern and is willing to locate any species of special concern within the project area that may exist to prevent impacting them. Hawkes Company is prepared to avoid all threatened plant species to the greatest extent practicable."

Response M6: Hawkes Co. conducted additional field surveys and revised the proposed project as described below in Findings of Fact 12. This survey verified the presence of the blunt sedge and Northern Androsace and documented additional presence of McCall's willow in the northern portion of the project. The survey also documented the false mountain willow (*Salix pseudomonicola*), a different plant species of special concern in the area. The reduction in project area and mining area associated with the Revised Proposal avoids the plants of special concern that were identified by the most recent survey. This survey verified the presence of the blunt sedge and Northern Androsace and documented additional presence of McCall's willow in

the northern portion of the project. The survey also documented the false mountain willow (*Salix pseudomonicola*), a different plant species of special concern in the area. The reduction in project area and mining area associated with the Revised Proposal avoids the plants of special concern that were identified by the most recent survey.

Comment M7: **Item 13b. Calcareous Fens** "The EAW states that, "DNR technical staff have identified a potential for a calcareous fen to be present within or near the proposed mine site". There is no evidence whatsoever that the Mercil site contains any calcareous fen. The Site has been previously assessed and has not been determined to be an Extremely Prairie Rich Fen by the DNR or the FQA. Groundwater appears to be sourced from shallower areas, which is inconsistent with the deeper groundwater source of a calcareous fen. While some species identified on the Site can be found in calcareous fens, they do not make a rich fen into a calcareous fen."

Response M7: The DNR conducted a site visit on June 19, 2017 to determine if a calcareous fen was present on the Site. The results of the site visit were reviewed and considered by a DNR technical team consisting of botanists, a wetland policy specialist, and a rare resources environmental review specialist. This technical team determined that the Site does not warrant regulation as a calcareous fen. The remnant calcareous fen indicator plant species indicate that the Site is too low on the spectrum of plant community presence to warrant being listed and regulated as a calcareous fen.

9. On June 26, 2017, the DNR requested of the Minnesota Environmental Quality Board (MEQB) a 15-day extension for making a decision on the need for an EIS for the proposed Project. On June 27, 2017 the DNR was granted the extension by MEQB. *See* Minn. R. 4410.1700, Subp. 2b.
10. DNR informed MEQB on July 27, 2017 that a 30-day postponement (per Minn. R. 4410.1700, Subp. 2a.B.) of the decision on the need for an EIS was necessary due to insufficient information, and to consider the additional information submitted by Hawkes Co. on July 26, 2017. DNR also notified the proposer and all persons who submitted comments on the EAW.
11. On August 29th, 2017, the DNR and Hawkes Co. entered into an agreement to postpone the decision on the need for an EIS in order to obtain additional information that is needed to make a reasoned decision about the potential for, or significance of, environmental impacts. The specific topics that required additional information were: potential impacts to plant species of special concern, uncertainty of potential impacts due to changes in hydrology, and wetland mitigation.
12. On July 3, 2017 Hawkes Co. submitted a Work in Public Water application that included revisions to the proposed project that was the subject of the EAW. These revisions reduced the project area to approximately 240 acre, reduced the mining area to approximately 170 acres and included four conservation easements adjacent to or near the proposed Project area. The proposed conservation easements total approximately 100 acres. The Revised Proposal is depicted as a figure in Attachment B. These Project revisions are incorporated into the consideration of potentially significant environmental effects for this Record of Decision.

13. Based upon the information contained in the EAW, consideration of public comments, and supplemental information supplied by Hawkes and developed by DNR, the DNR has identified the following types of potential environmental effects associated with the Project:
    - Project Construction and Mining
    - Land Cover Types
    - Land Use
    - Wildlife and Habitat
    - Species of Special Concern
    - Rare Natural Communities
    - Hydrology
    - Wetlands
    - Water Quality
    - Hazardous Materials
    - Noise
    - Dust
    - Vehicle Emissions
    - Historic Properties

    Each of these environmental effects is discussed in more detail below.

    a. Project Construction and Mining

    This topic was addressed in EAW Item 6.

    The Revised Proposal consists of an approximate 240-acre site near Newfolden, Marshall County, MN to be used for reed sedge peat mining. Of the 240 acres, approximately 170 acres have peat resources that are proposed to be mined. Construction related activities would include construction of a drainage system, new roads and upgrades to existing roads, and construction of areas for overburden storage and peat stockpiling. The drainage system would ultimately consist of approximately 28,000 linear feet of six-foot wide ditches that convey water to two sedimentation basins that would discharge to an existing swale that empties into the Middle River. Four miles of access roads would be constructed as 20-foot wide 80,000-pound roads. Approximately five acres of upland area would be prepared for stockpiling and storage of peat material and overburden.

    Mining operations would commence once the Site has been drained sufficiently to allow equipment operation. Approximately four to six inches of surface material would be removed and stockpiled as overburden to be used as part of site reclamation. Peat would be milled, harrowed, and turned to promote drying before being harvested by vacuum harvesters and placed in storage areas for transportation to existing plant facilities in East Grand Forks for further processing. The Site would be harvested in phases starting at the southern portion of the Site with additional areas opened to the north as mining progressed. Under this phased approach, a four-inch layer of peat would be harvested annually from the “open” areas, equating to a total of 36,000 cubic yards per year of peat harvested over a 15-year period.

    Site reclamation would be accomplished in phases beginning in the southern portion of the Site and proceed north as mining was completed. The stockpiled overburden would be placed and some field ditches would be filled in those areas no longer being mined. Establishment of

vegetation would begin during the first normal planting period after an area is no longer scheduled to be disturbed. If the overburden is unsuccessful in establishing vegetation, Hawkes Co. proposes to use Board of Water and Soil Resources 34-271 Wet Meadow South & West seed mixture to facilitate establishment of vegetation. Application of a Roundup Custom herbicide is proposed to manage invasive species on the Site. Reclamation of the entire Site would not occur until all mining is complete, at which time all ditches would be filled and other features such as roads, stockpiles and sedimentation basins would be removed.

b. Cover Types

This topic was addressed in EAW item 7.

The nature of mining proposals necessitates the assessment of cover type changes to address site reclamation. To facilitate the extraction of the peat resources, there would be extensive cover type change during mining. Once reclamation is completed, the Site would experience a second cover type change. The maximum cover type change for the wetland area would be a reduction of approximately 200 acres of wetland area during mining. Post reclamation, the Site would return to wetland. The reclaimed wetland would not be the same type of wetland as the pre-mining wetland. Approximately 24 acres of forest would be converted to roads and stockpiles during mining. Post reclamation these twenty-four acres of forest would be converted to brush or grassland. This area may eventually develop into a forest or wooded area depending on long term use of the Site.

A comment received on the EAW expressed concern about the conversion of wooded/forest land to brush/grassland. The commenter recommended the proposer plant trees at the completion of the project to compensate for the impact.

c. Land Use

This topic was addressed in EAW Item 9

The Site and proposed mining activity is partially located on School Trust Land that is being managed by the DNR as part of the New Maine Wildlife Management Area. DNR has the statutory duty under Minnesota Statute § 127A.31 to "…secure the maximum long-term economic return from the school trust lands consistent with the fiduciary responsibilities imposed by the trust relationship established in the Minnesota Constitution, with sound natural resource conservation and management principles, and with other specific policy provided in state law." If approved, this Project would provide "economic return" to the Permanent School Fund.

d. Wildlife and Habitat

This topic was addressed in EAW Item 13.

During mining operations, up to 240 acres of wildlife habitat would be disturbed or lost due to access roads, stockpile areas, sedimentation ponds and mining areas. Noise and human activity from mining operations would also displace wildlife from the area. Potential introduction of invasive plant species may also result in further degradation of wildlife habitat in the area.

After mining is completed and assuming successful reclamation, wildlife habitat could be established, albeit of a different type than currently exists at the Site. Potential changes in wetland and upland plant communities, including the potential for increased invasive plant species, would adversely impact the ability to return wildlife habitat to its pre-mining condition. The reclaimed wetland and upland areas may still provide wildlife habitat, but the specific types of habitat and the wildlife species that use that habitat would be different than pre-mining conditions.

Some of the comments received on the EAW indicated commenters thought the wildlife would be more abundant with a wider variety of species after reclamation, while others expressed concern about negative impacts to habitat.

e. Species of Special Concern

This topic was addressed in EAW Item 13.

The EAW documented that three plant species of special concern could be impacted by the project. Two upland plant species, blunt sedge (*Carex obtusata*) and Northern Androsace (*Androsace septentrionalis*) were previously identified within the project area. A third species, McCall's willow (*Salix macalliana*) a wetland species, has been identified just north of the Site and could be present within the project area. A fourth plant species of special concern that was inadvertently not identified in the EAW, spike oat (*Avenula hookeri),* has been identified adjacent to the project area and could also be present in the project area. All of these species were identified over twenty years ago. It is uncertain if they are still present at or near the Site, and if so, where. The project proposer submitted two reports related to plant species; however, both of these reports are based on site visits that took place at the end of, or outside, the growing season. Thus, it is possible that the biologists may not have been able to identify all plant species that are actually present at the Site. DNR staff have also visited the Site, but these Site visits were not intended as systematic surveys to identify endangered, threatened, or special concern plant species.

After the decision on the need for an Environmental Impact Statement was postponed, Hawkes Co. conducted an additional survey to identify plant species of special concern. This survey verified the presence of the blunt sedge and northern androsace and documented additional presence of McCall's willow in the northern portion of the project. The survey also documented the false mountain willow (*Salix pseudomonicola*), a different plant species of special concern in the area. The reduction in project area and mining area associated with the Revised Proposal avoids the plants of special concern that were identified by the most recent survey.

The yellow rail (*Coturnicops noveboracensis*) is an avian species of special concern that has been identified north of the project area. Suitable habitat for this species is present within the project area. Systematic surveys for this species have not been conducted within the project area, so there is uncertainty about whether or not this species is present or using habitat within the project area.

A species is considered a species of special concern if, although the species is not endangered or threatened, it is extremely uncommon in Minnesota or has unique or highly specific habitat

requirements and warrants careful monitoring of its status. This category includes, but is not limited to, species on the periphery of their range that are not listed as threatened and species that were once threatened or endangered but now have increasing or protected, stable populations. Unlike endangered and threatened species, species of special concern do not have any regulatory protections.

f. Rare Natural Communities

This topic was addressed in EAW Item 13.

The proposed mining area is in a Prairie Rich Fen native plant community. Prairie Rich Fens have conservation status of S3, meaning that they are vulnerable to extirpation within Minnesota. Although there are many Prairie Rich Fens within the Aspen Parklands ecoregion, this specific fen has a condition rank of A/B, meaning it is an example of a very high quality fen that is not as prevalent as lower quality fens within the ecoregion. Approximately 170 acres of the 210 acre Prairie Rich Fen would be mined, and reclamation would not return the Site to a Prairie Rich Fen. The Revised Proposal does propose conservation easements that are on portions of native plant communities including approximately 40 acres of remnant rich prairie fen and 20 acres of tamarack-black spruce swamp, both of which have a conservation status rank of S3. The remaining native plant communities within the proposed easements have status ranks of S4 or S5, which means these plant communities are not as vulnerable to extirpation as the plant communities with a status rank of S3.

The Revised Proposal is within a site of High Biodiversity Significance (Site 71). The importance of Site 71 stems from its internal diversity and the relatively high quality of several of these communities, combined with the relatively unfragmented landscape of uplands and wetlands. It represents one of the best examples of the complex of ridge and wetland communities that forms in this beach-interbeach setting. At the time of the Minnesota Biological Survey (MBS) survey in August and September of 1992, the 3,085-acre Site 71 was one of a group of contiguous, only partially fragmented set of 11 connected sites comprising over 12,000 acres of wooded uplands and adjoining wetlands west and northwest of the town of Middle River. While other sites within these 12,000 acres also contain beach-interbeach complexes, Site 71 is a particularly good example given the quality, diversity, and density of the multiple native plant community types.

Several commenters expressed concern about the proposed impacts to the rare natural community and doubt that it could be restored after the project was completed.

The EAW identified the potential for a calcareous fen to be present on the east portion of the project area. DNR staff conducted a site visit on June 19, 2017 to determine if a calcareous fen was present. The results of the site visit were reviewed and considered by a DNR technical team consisting of botanists, a wetland policy specialist, and a rare resources environmental review specialist. This technical team determined that the Site does not warrant regulation as a calcareous fen. The remnant calcareous fen indicator plant species indicate that the Site is too low on the spectrum of plant community presence to warrant being listed and regulated as a calcareous fen.

g. Hydrology

This topic was addressed in EAW Item 11.

The proposed Project would drain approximately 200 acres of wetland area. The extent of hydrologic change could be greater depending on how much area outside the mining area would drain to the proposed ditch system. The influence of groundwater upwelling on the Site and groundwater contribution to the wetland is another area of uncertainty for predicting changes in Site hydrology. The Site is somewhat constrained for surface flow due to geologic constrictions both north and south of the Site that prevent water from flowing to the Site. As part of a legal challenge to the U.S. Army Corps of Engineers' determination that the Site was a Water of the United States, the project proposer was able to demonstrate relatively little surface water connection between the Site and the Middle River. During Project operations, the Site would be drained through two sedimentation basins that discharge to the Middle River. The quantities of water proposed to be discharged from the Site to the Middle River are uncertain.

The Project proposer has submitted hydrologic information collected at its existing peat mine location to use as a basis to estimate discharge rates from the Site during Project operations. This information identifies that Hawkes Co.'s existing peat operations have discharge rates ranging between 0.24 and 0.80 million gallons per day. Data also demonstrates typical discharges from Hawkes Co.'s existing operations are at 0.23 cubic feet per second (cfs) with peak flows at 10.35 cfs. It is uncertain if the proposed Project would have similar discharge rates.

After the decision on the need for an Environmental Impact Statement was postponed, Hawkes Co. submitted an application for Work in Public Waters for the Revised Proposal. Review of the application has included a review of potential groundwater and surface water impacts. An internal memo dated December 20, 2017 documents this review and provides potential permit conditions that can be considered to address the uncertainty of any potential impacts to groundwater and surface water from changes in hydrology. The memo addressed indirect impacts to wetlands and impacts to the Middle River from increased water discharges. Review of information submitted by Hawkes Co. and previous studies conducted by the DNR determined that the potential for significant impacts to these resources (nearby wetlands and the Middle River) is limited.

h. Wetlands

This topic was addressed in EAW Item 11.

Unnamed public water wetland 45-33W is an approximately 190-acre wetland. Approximately 170 acres of the public water wetland would be ditched, drained and mined as part of the proposed project. Non-public water wetlands adjacent to the public water wetland may be directly impacted by mining operations or indirectly impacted by changes to hydrology during and after mining operations. The draining of the wetland areas would last for approximately 15 years until the ditches and sedimentation ponds are filled and some portion of the hydrology is restored to the area. Wetland characteristics in the area would not return to a pre-mining condition, but would likely still maintain some level of wetland features. The reclaimed wetland

would likely be a different type of wetland and support different plant species, including increased invasive species, consist of more open water, provide different wildlife habitat, and support different wildlife species than the pre-mine wetland.

Several commenters expressed concern about the proposed impacts to the wetland complex and doubt that it could be restored after the project was completed.

i. Water Quality

This topic was addressed in EAW Item 11.

The majority of water from the Revised Proposal would be discharged to the Middle River through a system of sedimentation basins designed according to the New Brunswick guidelines. The effectiveness of the New Brunswick method for water treatment at peat mining operations has been demonstrated, but that success depends on regular monitoring of the sedimentation basins and close adherence to a maintenance schedule. The proposed discharge, system design, monitoring and maintenance would be subject to regulation by the Minnesota Pollution Control Agency (MPCA) under the NPDES/SDS permit system.

A portion of the access road would not discharge to the sedimentation basin. Construction of this road would require Hawkes Co. to apply for coverage under the General Construction Stormwater Permit issued by MPCA.

j. Hazardous Materials

This topic was addressed in EAW Item 13.

There would be minimal project-related use or storage of hazardous materials. Hazardous materials that are anticipated would be the typical fuels and oils associated with trucks, tractors, and vacuum harvesters. Small spills or leaks could occur during fueling, equipment operations, or mechanical failure.

k. Noise

This topic was addressed in EAW Item 17.

Under routine operations, it is expected that the noise generation from the Revised Proposal would be similar to farming operations in the area. There are two residential or farmstead properties 0.25 miles to the east of the Site and another 0.25 miles northwest of the Site. These are the nearest sensitive receptors and would not be expected to be adversely impacted by the noise generated during operations.

Noise from the peat mining operation would adversely impact nearby wildlife. MPCA comments received on the EAW noted that Hawkes Co. would be subject to state noise standards and should ensure its equipment is fitted with appropriate mufflers during operation. The agency further noted that the noise area classification (NAC) under state law is based on where the receptor of a noise is located and that the residences identified would be considered NAC1 areas in the case of a noise complaint.

l. Dust

This topic was addressed in EAW Item 16.

During active mining periods, dust could be generated on-site and could migrate off-site, depending on wind conditions. All vacuum harvesters would be equipped with dust collection systems to limit dust migration off-site. Peat and overburden stockpiles could also be sources of dust during periods of strong winds. Truck traffic on the gravel access roads is anticipated to be the largest source of dust from the proposed Project, though substantial dust can also be generated from peat fields on windy days. Dust would increase the nutrient load to wetlands off-site if it settles there.

m. Vehicle Emissions

This topic was addressed in EAW Item 16.

There would be a small increase in off-site vehicular traffic due to the proposed mining activity. On-site traffic would consist of a tractor with a vacuum harvester attachment to collect the peat, an occasional bulldozer, and a side-dump tractor-trailer for transport.

n. Historic properties

This topic was addressed in EAW Item 14.

There are no known historic properties, archeological sites, and/or traditional cultural properties on or in close proximity to the Site.

A comment received on the EAW from the Minnesota Historical Society State Historic Preservation Office (SHPO) indicated the Site is in an area with potential to contain archaeological sites. The agency recommended an Unanticipated Discoveries Plan be prepared to ensure a protocol is in place regarding actions to take if human remains or artifacts were to be discovered during proposed mining operations.

14. Hydrologic data collected from the Hawkes Co.'s existing peat mining operations were reviewed as part of EAW development and as part of Public Waters Work permit application review. Existing additional studies on indirect wetland impacts from peat mining operations were also reviewed as part of Public Waters Work permit application review. DNR hydrologists prepared an internal memo dated December 20, 2017 for the Revised Proposal that identifies limited potential significant impacts to adjacent wetlands from dewatering and from increased water discharges to the Middle River. The internal memo also identified potential permit conditions that would be considered to monitor changes in hydrology from the Revised Proposal.
15. The Revised Proposal reduces the proposed mining area to avoid known plant species of special concern that are near the project area. Two of the four proposed conservation easements of the Revised Proposal contain known plant species of special concern. The listing status "species of special concern" does not provide any regulatory requirements for avoidance or mitigation for these plant species.

16. The Project proposer asserts that, based on his previous reclamations, reclamation of the Site would result in the creation of a wetland of equal or greater public value than that which currently exists on the Site. DNR staff have reviewed information on the current conditions of Hawkes Co.'s previously reclaimed sites and have determined that these sites do not constitute evidence that Hawkes Co.'s proposed reclamation would address the public value of the rare natural plant community that would be lost as part of the proposed Project.

17. On July 26, 2017, Hawkes Co. submitted a letter to the DNR that discusses the issues of Site hydrology, plant communities and wetland mitigation. The letter asserts that DNR mapping of the public water wetland located on the Site is in error. Hawkes Co. argues that the current public water wetland at the Site is actually limited to the southern fifteen percent of the Site that is a Type 3 shallow marsh. The July 26, 2017 Hawkes Co. letter provides no additional information on the Site hydrology that would assist in making a reasoned decision about the potential for significant environmental effects from the proposed Project. The July 26, 2017 Hawkes Co. letter provides no additional information on the Site plant communities, nor does it provide additional information on plant communities at Hawkes Co.'s existing reclamation sites that would assist in making a reasoned decision about the potential for significant environmental effects from the proposed Project.

18. DNR has reviewed available information to evaluate the Hawkes Co.'s assertion regarding the extent of the public water wetland, including a public water worksheet that was completed at the time of the public water inventory (PWI). This worksheet identifies the wetland as a Type 4 wetland, and the PWI map of the wetland matches the digital mapping used for the EAW. DNR staff agree that the current condition of the wetland is not limited to a Type 4 wetland; however, this fact alone does not support Hawkes Co.'s claim that the current Site wetland is not a public water wetland. Site conditions may have changed since the time of the PWI and the wetland complex may very well have had changes between Type 2, 3 and 4 wetlands. The Ordinary High Water (OHW) determination is used as the definitive measure for determining the extent of any public water. DNR conducted an Ordinary High Water (OHW) determination for the wetland on October 9, 2013 to determine the extent of the public water wetland. This survey concluded the OHW was at an elevation of 1138.5 feet. Comparing this elevation to available land elevation data on the Site was inconclusive to determining how much of the mapped wetland is at this elevation. There is insufficient information in the record to determine if the extent of the public water wetland should be revised. Reducing or removing the public water wetland designation of the site would reduce the ongoing public regulatory authority to address potential impacts to the rare natural plant community that contains the public water wetland.

19. The July 26, 2017 Hawkes Co. letter does provide additional information on wetland mitigation. The additional information provided is a list of potential wetland mitigation options that were discussed at a meeting between Hawkes Co. and DNR on July 24, 2017. These mitigation options include:

    - Further enhancing reclaimed peat mining sites by seeding or other methods;
    - Providing research sites where mine reclamation can be studied to determine the mechanisms that provide the best results;
    - Protecting a Rank S3 wetland plant community area on or off the Site in the beach ridge complex area;

- Harvesting the wetland plant seeds from the Site and storing for use during the reclamation process;
- Using the 34-acre Hirst restoration site that Hawkes Co. is restoring from farmland to rich prairie fen wetland for Corps-required temporal mitigation for a different project; and
- Using wetland plant seed harvested from the Site to seed the Hirst restoration site.

20. The Hirst restoration site is an approximate 34.19-acre restoration site that is being used as wetland credit to satisfy the U.S. Army Corps of Engineers' requirements for authorization to disturb wetlands within Sites 7 and 10 of the Hawkes. Co.'s existing mining operations. Most of the wetland credits associated with the Hirst restoration site have been used to mitigate wetland impacts from Hawkes Co.'s existing mining operations.

21. The Revised Proposal reduces the potential impact to the public water wetland and state land, both of which trigger the regulatory requirement for mitigation of equal or greater public value. The Revised Proposal also includes approximately 100 acres of conservation easements that contain native plant communities. Identified native plant communities within the area of the proposed easements include approximately 40 acres of remnant rich prairie fen and 20 acres of tamarack-black spruce swamp, both of which have a status rank of S3. The remaining native plant communities within the proposed easements have status ranks of S4 or S5, which means these plant communities are not as vulnerable to extirpation as the plant communities with a status rank of S3.

22. The DNR has considered the public values provided by the existing public water wetland and state land, as well as the likely public values provided by the reclaimed condition of the Revised Proposal (including conservation easements). DNR staff have concluded it is reasonable to assume that the public values related to water quality, floodwater retention, public recreation, low-flow augmentation and other public uses will likely change somewhat between the existing wetland and the reclaimed wetland, but that these shifts, which may be positive or negative, would be relatively minor in comparison to the loss of 170 acres of 210 acre rare native plant community. They have further concluded that the Revised Proposal does not address rare native plant communities at a level of equal or greater public value.

23. DNR regulatory authority under the Permit to Mine and Public Waters Works permit are sufficient to require additional mitigation that would compensate for the proposed loss of native plant community public values. Examples of specific mitigations that would provide suitable mitigation are identified below in Finding of Facts 24, 25 and 26.

24. Mitigation option 1 includes compensation of school trust land that is currently being managed as a Wildlife Management Area that contains a rare wetland plant community. By compensating the school trust, the obligation for providing revenue to public schools for that land would be satisfied. In doing so, the rare wetland plant community would be protected from mining, timber harvest or other revenue generating activities that would degrade the wetland plant community. The specific location and size of the area for school trust compensation would be somewhat flexible but should be within the Minnesota Lake Agassiz Aspen Parkland and be a rare native wetland plant community with conservation rank of S1, S2, or S3.

25. Mitigation option 2 includes placement of a conservation easement on private land. The specific location and size of the area the conservation easement would be somewhat flexible but should be

within the Minnesota Lake Agassiz Aspen Parkland and be a rare native wetland plant community with conservation rank of S1, S2, or S3. In addition, the conservation easement must be held by a public or non-profit organization whose purposes include conservation.

26. Mitigation option 3 would require enhanced reclamation for a portion of the proposed mining area, which would more closely resemble a native plant community than Hawkes Co.'s existing reclaimed areas. A wet meadow with limited invasive species is an example of the type of reclaimed condition that could meet this mitigation requirement.

27. The following permits and approvals would be needed for the Project:

Unit of government	Type of application
MPCA	NPDES/SDS
MPCA	Construction Stormwater Permit
DNR	Permit to Mine
DNR	School Trust Land Lease
DNR	Public Waters Work Permit
DNR	Water Appropriation Permit
DNR	Aquatic Plant Management Permit

CONCLUSIONS

1. Minnesota Rule 4410.1700, subpart 7, sets forth the following criteria that the DNR must analyze to decide whether a proposed project has the potential for significant environmental effects:

    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.

When deciding whether a project has the potential for significant environmental effects, the RGU must compare the potential impacts that "are reasonably expected to occur" with the subpart 7 criteria. Minn. R. 4410.1700, Subp. 6.

2. *Type, extent, and reversibility of environmental effects*. Based on the facts set forth in paragraphs 7-27 and the information contained in the administrative record, the DNR concludes that the following types of potential environmental effects, as described in the Finding of Facts, will be limited in extent, temporary, or reversible:

    Hazardous Materials
    Noise
    Dust
    Vehicle Emissions
    Historic Properties
    Species of Special Concern

3. *Cumulative potential effects:* Based on the Findings of Fact set forth in paragraphs 7 – 27 above and the information contained in the administrative record, the DNR concludes that the potential cumulative effects from the Revised Proposal would be not be significant.

4. *Extent to which environmental effects are subject to mitigation by ongoing public regulatory authority*: Based on the Findings of Fact set forth in paragraphs 7 - 27 above and the information contained in the administrative record, the DNR concludes that there is sufficient ongoing public regulatory authority and specific measures identified that can be expected to effectively address the following environmental impacts of the Revised Proposal:

    Project Construction and Mining
    Land Cover Types
    Land Use
    Wildlife and Habitat
    Rare Natural Communities
    Hydrology
    Wetlands
    Water Quality

5. *Extent to which environmental effects can be anticipated and controlled as a result of other environmental studies undertaken by public agencies or the project proposer, or other EISs*: Based on the Findings of Fact set forth in paragraphs 7 - 27 above and the information contained in the administrative record, the DNR concludes that the 1996 Hawkes Co. Inc. Peat Mining EIS, Hydrologic and Water Quality Monitoring of Fuel Peat Mine near Cotton MN (Berglund, E.R. et al. 1985), Concept Feasibility Study for the Middle River Subwatershed (HDR Engineering, Inc. 2016) and The Drainage of Peatlands: Impacts and Rewetting Techniques (Landry, J. and Rochefor, L. 2012) contain information that can assist in anticipating and controlling environmental effects of the proposed Project.

6. As set forth in paragraphs 1 - 27 above, the DNR has fulfilled all the procedural requirements of law and rule applicable to determining the need for an environmental impact statement on the

proposed Hawkes Company, Peat Mining – Mercil Site Project in Marshall County, Minnesota set forth in Minn. Stat. § 116D.04, Subp. 2a(c) and Minn. R. 4410.1400 and 4410.1500.

ORDER

Based on the above Findings of Fact and Conclusions:

The Minnesota Department of Natural Resources determines that an Environmental Impact Statement is not required for the Hawkes Co. Mercil Site Project.

Any Findings that might be properly termed Conclusions and any Conclusions that might be properly be termed Findings are hereby adopted as such.

Dated this 29th day of December, 2017

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

Barb Naramore

Barb Naramore
Assistant Commissioner