DEPARTMENT OF NATURAL RESOURCES

Record of Decision

In the Matter of the Determination of the Need for an Environmental Impact Statement for the Spruce Valley Gravel Pit Dewatering Project Spruce Township, Minnesota

FINDINGS OF FACT, CONCLUSIONS, AND ORDER

FINDINGS OF FACT

1. Spruce Valley Corporation (proposer) is proposing to dewater an existing 22-acre gravel pit (Sehlstrom Pit) located in Spruce Township, Minnesota. The pit would be dewatered to expose the gravel in the existing pit, where it would be mined and processed on-site.

2. On December 7, 2018, the Minnesota Department of Natural Resources (DNR) determined the need for a State Environmental Assessment Worksheet (EAW). The proposed project requires preparation of an EAW for new water appropriation for commercial or industrial purposes of either surface water or ground water averaging 30,000,000 gallons per month. *See* Minn. R. 4410.4300, Subp. 24.

3. The DNR is the Responsible Governmental Unit (RGU) in the preparation and review of environmental documents related to the Spruce Valley Gravel Pit Dewatering Project (the Project). *See* Minn. R. 4410.4300, Subp. 24.

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

5. The DNR filed the EAW with the Minnesota Environmental Quality Board (EQB) and a notice of its availability was published in the EQB *Monitor* on September 21, 2021. A copy of the EAW was sent to all persons on the EQB Distribution List. The EAW was also sent to those persons known by DNR to be interested in the proposed Project and to those persons requesting a copy. A statewide press release announcing the availability of the EAW was sent to newspapers, radio, and television stations. Copies of the EAW were also available for public review and inspection at the DNR, Hennepin County, and Crookston Public libraries. The EAW was also made available to the public by posting on the DNR's website. *See* Minn. R. 4410.1500.

6. The 30-day EAW public review and comment period began September 21, 2021 and ended Wednesday October 20, 2021. Written comments on the EAW could be submitted to the DNR by U.S. mail or by email. *See* Minn. R. 4410.1600.

Public Comment Period

7. During the 30-day EAW public review and comment period, the DNR received 15 written comment letters on the EAW, containing 30 comments in total. A list of the individuals and agencies, along with a summary of their comment(s) is listed below:
    a. Jim Etzel
    b. Todd Peterson, City of Roseau
    c. Rockford Fevold
    d. Collin Jensen
    e. Melissa Skoglund
    f. Raymond Grindahl
    g. Jodie Janzen
    h. Gary Gregerson
    i. Jim Walsh, Minnesota Department of Health
    j. Sarah Beimers, SHPO
    k. Steve Roos, MDA
    l. Karen Kromar, Minnesota Pollution Control Agency
    m. Larry Nyhus
    n. Brian Norman
    o. Robert Tuttle

8. The DNR appreciates all comments received. All persons that commented in writing will be provided with this Record of Decision. See Minn. R. 4410.1700, Subp.5. Comments will be provided to the proposer and permitting authorities through this Record of Decision.

Response to Comments

9. Minnesota Rules 4410.1700, Subp. 4 specifies that the Record of Decision (ROD) must include specific responses to all substantive and timely comments on the EAW. All comments and issues raised in comment submittals were reviewed to determine if they addressed the accuracy or completeness of the material contained in the EAW or environmental impacts that might warrant further investigation prior to the final ROD. Comment letters are available upon request.

10. Responses to all substantive comments are summarized below in ¶¶12 to 17. Each submittal was given an identification number. *See* Attachment A. Many submittals contained more than one comment. In those cases, each comment was assigned a unique comment identification number (comment ID). Similar comments were grouped together, each group was analyzed, and a single response to comment was developed for the category. *See* Minn. R. 4410.1700, Subp. 4.

11. Three commenters provided non-substantive comments in opposition to the proposed Project, personal opinion on the proposed Project, and general concerns on topics that were fully addressed in the EAW. These comments did not address the accuracy or completeness of the material contained in the EAW or environmental impacts and did not warrant further investigation prior to the final ROD. In accordance with Minn. R. 4410.1700, Subp. 4, these comments did not receive a specific response.

12. Water quality, groundwater: Five commenters (f, g, h, m, and n) expressed concern related to water quality impacts to groundwater as a result of the proposed Project including mobilizing arsenic, increased hardness, and poor taste.

Response: Comment noted. Minnesota Statutes Subdivision 103G.287 specifies that proposed appropriations need to protect water quality. Water quality impacts would be assessed and, if necessary, mitigated through the DNR's water appropriation permit process, potentially through water testing in coordination with Minnesota Department of Health. As part of the water appropriation permit water sampling in domestic wells should be included to document any potential change. If water quality degrades then the permittee would need to pay to install and maintain a treatment unit to restore the water quality to the baseline condition. Additional information is located in Appendix B.

13. Water quality, surface water: One commenter (l) expressed concern about the water quality of the discharge water, specifically the dissolved oxygen levels of the discharge water.

    Response: Comment noted. Pollutants of concern in discharge water quality is regulated through the MPCA general permit. Water would be discharged to the road ditch, then flow to County Ditch No. 11, and then discharge to the Roseau River. This type of discharge is not expected to cause or contribute to an exceedance of water quality standards for this parameter.

14. Water quality, erosion: One commenter (l) noted that there should be no erosion within the receiving waters as a result of increased flows.

    Response: Comment noted. The Project would be designed and operated under the requirements of the MPCA's Nonmetallic Mining/Associated Activities General Permit MNG490000. Waters would be discharged to a control device to ensure that adequate treatment is obtained prior to leaving the Project site. Monitoring plans and project specific best management plans (BMPs) would be developed as part of the Pollution Prevention Plan for the project as required by MNG490000 and potential requirements of the local Watershed District Permit in order to protect against sedimentation and potential stream bank erosion in receiving waters.

15. Water Quantity: Eleven commenters (c, d, e, f, g, h, i, k, m, n, and o) expressed concern related to wells going dry and aquifer reliability.

    Response: Comment noted. This would be evaluated through the water appropriation permitting process, which would evaluate the hydrogeology of the site. If the water is appropriated and wells are impacted, then the well interference process can resolve the issue. The well interference process would involve a hydrogeological analysis to determine contributors to the issue, the determined contributors to the issues would then need to pay for the cost of restoring an adequate water supply.

16. Wildlife – Two commentors expressed concern about the loss of waterfowl habitat.

    Response: Comment noted. DNR Wildlife staff note that the ponds in the gravel pit provide resting places for waterfowl, such as Canada geese, during migration and might offer escape cover for waterfowl broods during the summer. The gravel pit does not appear to be high quality waterfowl habitat. If the pit is dewatered, waterfowl would likely seek out other open water locations on the landscape.

17. Noise – Three commentors expressed concern about noise on the site.

Response: Comment noted. All projects must ensure compliance with state noise standards are then regulated at the township and county level. Noise ordinances are typically regulated at the local level and the township/county should be contacted**.**
Mitigation recommendations, in addition to silencer boxes for the pumps, include ensuring that equipment is properly muffled and uses quieter backup alarms. Consideration should also be given as to which operations occur at night versus during the daytime, creating berms around the perimeter of the pit, and identifying setbacks for processing equipment (which may be less relevant if the equipment is recessed at the bottom of the pit).

Record of Decision Preparation

18. Pursuant to Minn. R. 4410.1700, Subp. 2b, the decision on the need for an EIS shall be made no later than 15 days after the close of the 30-day review period. This 15-day period shall be extended by the EQB chair by no more than 15 additional days upon request of the RGU.

19. On October 26, 2021, the DNR requested a 15-day extension for making a decision on the need for an EIS for the proposed Project. On October 26, 2021, the DNR was granted the extension by EQB. *See* Minn. R. 4410.1700, Subp. 2b.

Environmental Effects

20. Based upon the analysis set forth in EAW Item 9, the DNR concludes that the proposed Project would not impact land use nor does land use affect the Project proposal as the land use would not change as a result of the Project.

21. Based upon the analysis set forth in EAW Item 14, the DNR concludes that the proposed Project would not impact historic properties nor do historic properties affect the Project proposal as there are no properties listed in the National or State Registers of Historic Places, and no known or suspected archaeological properties in the area that would be affected by this Project.

22. Based upon the information contained in the EAW and received as public comments, the DNR has identified the following potential environmental effects associated with the proposed Project:

    a. Geology
    b. Water Resources,
    c. Contamination/Hazardous Materials/Wastes
    d. Wildlife Resources and Habitat,
    e. Visual Impacts
    f. Air Quality
    g. Noise
    h. Transportation
    i. Cumulative Potential Effects

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

a. Geology

This topic was addressed in EAW Item 10.

The Study Area lies in an area that was once the lake bottom of Glacial Lake Agassiz. The topography is flat, and the Study Area elevation is approximately 1,060 feet (NAVD 88).

Much of the overburden/soils described in the EAW have already been removed as a part of previous mining activity onsite. The proposed Project would allow for continued mining of sand and gravel deposits below the existing mining elevations and within the water table aquifer. It is anticipated that operations would allow for an additional 25 feet of material, or 911,000 cubic yards of sand and gravel would be removed from the pit.

b. Water Resources

This topic was addressed in EAW Item 11 and paragraphs 12, 13, 14, and 15 of this document.

Groundwater

The proposed Project has the potential to impact both groundwater quality and quantity.

The increased pumping might change groundwater flow dynamics or redox conditions. This might in turn change the groundwater quality. The shallow aquifer where the gravel pit and nearby wells are located have elevated arsenic levels close to the drinking water standard and a slight change in quality might elevate arsenic over the drinking water standard. As part of the water appropriation permit water sampling in domestic wells should be included to document any potential change. The baseline water quality should be determined using more than one sample per well. Sampling schedule will be determined in coordination with Minnesota Department of Health and might include wells other than domestic wells. A full description of the permit conditions is located in attachment B.

Increased groundwater pumping might impact nearby domestic wells ability to provide water for use. Likely an aquifer test and monitoring wells will be required. The model used to analyze impacts is a simplified uncalibrated model and the conceptual model would need to be evaluated through the water appropriation process which would likely include an aquifer test and other hydrogeological investigations to determine whether the appropriation would impact water availability to nearby domestic wells. If potential impacts were identified, mitigation measures such as the appropriator paying to lower pumps or drilling new wells would be required as part of any permit issuance to minimize the potential for well interference. If the water appropriation permit is authorized and a well interference is encountered the well interference process would involve a hydrogeological analysis to determine contributors to the issue, the determined contributors to the issues would then need to pay for the cost of restoring an adequate water supply.

Based on comments it appears that dewatering done in the section to the north of the Project impacted domestic wells and flowing conditions at 12-15 feet below ground surface.

Water Discharge and Erosion

The proposed Project has the potential for increased water discharge and erosion due to increased flow in ditches and the outlet to the Roseau River.

The increased flows due to discharge from the pit might compound flooding issues. County Ditch 11 is a jurisdictional drain administered by Roseau County. Currently the system is undersized to handle a 2-5 year rain event. An additional 37 cfs might exacerbate this condition if pumping were to occur continuously, especially during a substantial runoff event. The DNR water appropriation permit would require discharge to cease during higher flow events to eliminate any additive impact.

Discharge of water from the pit is subject to ongoing public regulatory authority under the Minnesota NPDES/SDS Industrial Stormwater General Permit and associated SWPPP.

c. Contamination/Hazardous Materials

Small capacity storage tanks associated with backup generators mighty possibly be used for dewatering activities. These storage tanks would either be double walled or placed in secondary containment if single walled. The generator(s) would also be placed in a protected area to limit the chance of accidental impacts or puncture from vehicles and other equipment.

Spill kits would be on hand during construction to address minor spills and releases from faulty equipment. In the event that a leak or spill does occur, immediate response and appropriate action to remedy the situation would be taken in accordance with MPCA guidelines and regulations. These response actions would be further detailed in a Spill Prevention, Control, and Countermeasure Plan.

The use of hazardous materials or petroleum products will be limited and primarily associated with fuel and lubricating oils for heavy equipment. No bulk storage or disposal of hazardous wastes or used petroleum products onsite is planned. Fueling and routine maintenance (e.g., oil changes) of equipment would be conducted offsite.

Any spills that might occur would likely be small and actions detailed in a Spill Prevention, Control, and Countermeasure Plan would prevent lasting environmental impacts.

d. Wildlife Resources and Habitat

This topic was addressed in EAW Item 13 and paragraph 16 of this document.

Fish Habitat

Additional flow during low/base flow events and might alter the natural flows and habitat of the Roseau River system. The increase in base flow conditions might alter habitats, specifically spawning habitats, and might have the following impacts:

- Cause loss of sites for macrophyte colonization
- Benefit non-native fish and plant species
- Loss of benefits for native predators via reduced access to concentrated prey
- Promote excessive growth of aquatic macrophytes
- Reduce diversity of macroinvertebrates
- Decrease access to shoreline nesting sites
- Proliferation of larval black flies
- Loss of sensitive species
- Decline of quantity and quality of spawning habitat
- Eliminate cues for movement of fish to overwintering habitat

- Reduce the quantity of fish, due to altered spawning habitat

The DNR is currently stocking Lake Sturgeon downstream of County Ditch 11 outlet as part of a Lake Sturgeon Restoration Plan in the Red River watershed. There are potential spawning areas just downstream the outlet from County Ditch 11.

The water appropriation permit could have a condition requiring pumping to be ramped during the stop and start of pumping to ensure that fish are not stranded after pumping ceases.

Waterfowl Habitat

The ponds in the gravel pit provide resting places for waterfowl, such as Canada geese, during migration and may offer escape cover for waterfowl broods during the summer. However, the gravel pit does not appear to be high quality waterfowl habitat. If the pit is dewatered, waterfowl would likely seek out other open water location on the landscape.

e. Visual

There are no designated scenic views or vistas on or near the proposed Project area. There are no vapor plumes expected for this Project. The dewatering of the pit lake and continuation of mining is not expected to result in new visual effects, with the exception of lights during non-daylight hours. There are no local construction specific permits. At this time there are no known permit conditions that would regulate construction hours.

f. Air

This topic is discussed in EAW Item 16.

Emissions

The proposed Project would include stationary sources that produce emissions of hazardous air pollutants, criteria pollutants, and greenhouse gases. These stationary sources would include the following:

- Equipment for gravel processing (e.g., crushing, screening, conveyor transferring, truck unloading, truck loading) would be used at the site.
- Processing equipment would be electric, with diesel power in place if electric power could not keep up with water inflow.
- A diesel-powered generator would be used at the site.
- A diesel-powered pump might be used if the water inflow cannot be maintained by using an electric pump.

Operations would involve a yet to be determined number of diesel machinery operating in a rural agricultural area. Emissions from the engines would be minimized by using units that are certified by the US Environmental Protection Agency (EPA) for their intended use based on model year and by using ultra-low sulfur (15 parts per million or less) diesel fuel

During construction, short-term increases in localized carbon monoxide levels and other vehicle-related emissions from construction equipment and worker transportation vehicles are anticipated. The magnitude of the construction emissions would be heavily influenced by the specific construction

activity occurring. Air quality impacts as a result of exhaust emissions from primarily diesel equipment would vary according to the phase of construction but would be minimal and temporary. To minimize impacts, contractors would be required to maintain equipment properly, including using any emissions controls, as specified by the manufacturer.

Air quality mitigation measures are not proposed.

Dust

Short-term air quality impacts from fugitive dust are anticipated due to travel on unpaved roads and the excavation associated with the proposed Project. The proposed Project would mitigate dust issues from construction traffic by using standard construction practices such as watering of exposed surfaces, covering of disturbed areas, and reduced speed limits on site. During Project operation, insignificant emissions would be generated by operations associated with gravel extraction, hauling, and processing. The proposed Project would mitigate dust issues from operation activities by using standard dust control practices such as watering of exposed surfaces, covering of disturbed areas, and reduced speed limits on site. Dust mitigation practices would be outlined in the proposed Project Operation SWPPP as part of the NPDES/SDS permitting process.

g. Noise

This topic was addressed in EAW Item 17 and paragraph 17 of this document.

Typical sources of noise in this area include operation of the existing gravel mining operation, use of agricultural equipment and traffic along the adjacent roadways. The proposed Project would contribute to existing noise in the area during dewatering and operation of the gravel pit. Temporary pit dewatering noise would last for at least 110 days at which time a continuous maintenance discharge (at a lower rate) would occur while mining is in operation. Large electric pumps would pump water from the pit into an open road ditch for discharge into the Roseau River. Residences near the proposed Project area might experience elevated noise levels at various times during dewatering and operation from pumping equipment compared to existing noise levels. The specifications of pumps that would be used for dewatering are not currently known. Although it is likely that large diesel, industrial pumps would be utilized for dewatering.

Noise expected during gravel mining would include noise from excavators, haul trucks, front end loaders, including safety-related backup beepers from equipment, and gravel processing equipment. The gravel would be removed from the pit and be processed to various gradations. This would require the use of screens and conveyor belts.

The proposed Project is expected to operate 24 hours a day. At this time there are no known permit conditions that would limit construction hours.

Mitigation recommendations, in addition to silencer boxes for the pumps, include ensuring that equipment is properly muffled and uses quieter backup alarms. Consideration should also be given as to which operations occur at night versus during the daytime, creating berms around the perimeter of the pit, and identifying setbacks for processing equipment (which may be less relevant if the equipment is recessed at the bottom of the pit).

h. Transportation

As of 2016, the average annual daily traffic (AADT) was approximately 610 vehicles per day for CSAH 24 and approximately 650 vehicles per day for CSAH 28 (MnDOT 2020). During construction/dewatering electric pumps would be hauled in to perform the dewatering and are expected to be on-site while the gravel pit is in operation. In addition, up to six culverts might potentially be replaced which would require construction equipment access along CSAH 24.

The nature of the dewatering and (potential) culvert replacement activities would not allow for the use of alternative transportation modes. Operations would be performed 24 hours per day. Vehicles and equipment would cease entering and exiting the site upon gravel pit operation closure.

Traffic associated with operation of the mine in terms of trucks hauling gravel from the pit would depend on market conditions and future demand for aggregate material. Any potential road wear and tear from hauling during operations would be addressed through Roseau County Transportation (Overweight Vehicle) permitting.

i. Cumulative Potential Effects

This topic was addressed in EAW Item 19.

Cumulative potential environmental effects are the combined effects of the proposed project and past, present, and reasonably foreseeable future projects. See Minn. R. 4410.0200, Subp. 11a. (2021). DNR identified the following reasonably foreseeable projects within the environmentally relevant area.

There is one reasonably foreseeable project identified during the EAW process, the Roseau Lake Rehabilitation project. The cumulative potential effects associated with this project are potential effects due to higher flows in ditches/Roseau River.

The project is anticipated to have increased flow compared to existing flow in the ditch system which might lead to increased erosion and scour within the ditch system and the Roseau River. The increased flow might lead to down cutting or destabilization of the banks within the ditch system. In addition, the increased flows might lead to scour and erosion at the outlet of County Ditch 11 to the Roseau River. The Roseau Lake Rehabilitation project might reduce the impact of the added suspended solids due to erosion and scour by allowing solids to settle out in the lake, but the proposed project might reduce the Roseau Lake Rehabilitation project's effectiveness as flood control. The potential for impacts to become significant could be mitigated through the use of BMPs.

The Roseau Lake Rehabilitation project was not designed to control for the additional water during high flow events. This could lead to the increased depth and duration of flooding events. The potential for impacts to become significant could be mitigated through pumping reductions or by requiring the cessation of pumping during high flow events. Cessation of pumping could be required through conditions in the DNR water appropriations permit, including trigger water levels for cessation based on culvert crown elevations.

No other potential cumulative effects are anticipated with the Project.

23. The following permits and approvals are, or might be needed, for the project:

Unit of Government	Type of Application	Status
United States Army Corps of Engineers	Section 404 of the Clean Water Act Permit	Might be required
United States Fish and Wildlife Service	Section 7 or 10 Federal Endangered Species Act Consultation - Review for Threatened and Endangered Species – informal coordination	Might be required
Environmental Protection Agency (Region 5), in coordination with the Minnesota Pollution Control Agency	Spill Prevention Control and Countermeasure Plan	Might be required
Federal Lead Agency	Section 106 of the National Historic Preservation Act review of historical and archaeological resources	Might be required
Minnesota Board of Water and Soil Resources	Minnesota Wetland Conservation Act Approval	Might be required
Minnesota Department of Natural Resources	Water Appropriation Permit	Required
Minnesota Pollution Control Agency	Clean Water Act Section 401 State Water Quality Certification	Might be required
Minnesota Pollution Control Agency	Air Emissions permit	Would be determined after submittal of Air permit applicability determination
Minnesota Pollution Control Agency	NPDES/SDS Nonmetallic Mining and Associated Activities General Permit	Required
Roseau County Highway Department	Application for Transportation Permit (Overweight Load)	Might be required

Unit of Government	Type of Application	Status
Roseau County	Application for Utility Permit on County Highway Right of Way	Might be required
Roseau River Watershed District	General Permit Application	Might be required
City of Roseau	Floodplain Development Permit	Might be required

CONCLUSIONS

1. The Minnesota Environmental Review Program Rules, *Minnesota Rules* part 4410.1700, subparts 6 and 7, set forth the following standards and criteria to compare the impacts that might be reasonably expected to occur from the project in order to determine whether it has the potential for significant environmental effects.

   In deciding whether a project has the potential for significant environmental effects, the following factors 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 might 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 result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs.*

2. *Type, extent, and reversibility of environmental effects*.

   Based on Findings of Facts, 22a-i, the DNR concludes that the following types of potential environmental effects, as described in the Findings of Fact, would be de minimis:

Land Use
Historic Properties
Traffic

Based on Findings of Facts, 22a-i, the DNR concludes that the following types of potential environmental effects, as described in the Findings of Fact, would be limited in extent, temporary, or reversible:

Water Resources Discharge and Erosion
Contamination and Hazardous Waste
Wildlife resources and habitat
Visual
Air Emissions and Dust

3. *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.*

   The effects of all past projects comprise the existing condition of the project area. Cumulative environmental effects result from the addition of the effects of the proposed project and reasonably foreseeable future projects to the existing condition.

   Cumulative potential impacts could include both project construction and operational activities. Potential cumulative impacts include the following: traffic, noise, dust, plant communities, possible introduction to invasive species, increased potential for erosion, and potential for water quality issues.

   As described in Findings of Fact paragraph 22i, environmental effects during the construction and operations phase of the proposed project could interact with any of the projects listed above.

   Based on the Findings of Fact above, the DNR concludes that the cumulative potential environmental effects to traffic, noise, dust, plant communities, potential introduction of invasive species erosion, and water quality issues are not expected to be significant when viewed in connection with other contributions; the degree to which the project complies with proper (permanent) monitoring and mitigation measures and maintenance to minimize project impacts.

4. *Extent to which environmental effects are subject to mitigation by ongoing public regulatory authority*. Based on the Findings of Fact set forth above and the information contained in the EAW, 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:

   Water Resources Groundwater: Environmental effects due to the dewatering of the pit are regulated through the DNR water appropriation permit. This includes both water quantity and quality concerns.

   Water Resources Discharge and Erosion: Environmental effects from stormwater, erosion and sedimentation are subject to mitigation by ongoing regulatory authority under the MPCA NPDES/SDS Nonmetallic Mining and Associated Activities General Permit and the required SWPPP, and the Roseau River Watershed General Permit. These approvals address potential stormwater runoff impacts where

erosion and sediment control BMPs would be installed prior to discharging. Water discharge would be subject to regulation through the Clean Water Act Section 401 State Water Quality Certification.

Contamination/Hazardous Waste: Environmental effects due to contamination/hazardous waste ware subject to regulation through the Spill Prevention Control and Countermeasure Plan.

Wildlife Resources and Habitat: The water appropriation permit through DNR can regulate the ramping up and down of pumping to prevent the stranding of fish when pumping ceases, the timing of pumping to not add additional water during flooding, and to limit fall and winter pumping to allow for the annual natural fluctuations and low flow.

Air Emissions and Dust: Environmental effects due to air emissions and dust are subject to permitting through the MPCA Air Emissions permit. The proposer's commitment to minimize dust would limit the environmental impacts of dust.

Noise: Operation of construction equipment and machinery would adhere to the State Noise Standards, which are not expected to be exceeded. Environmental effects due to facility construction-, operation-, and maintenance-related noise are subject to mitigation by ongoing public regulatory authority under the MPCA-administered State Noise Standards.

Traffic: Environmental effects due to traffic are subject to ongoing regulatory authority under Roseau County, local government units, and MnDOT. Impacts to traffic are expected to be negligible.

Prior to initiation of this project, the permits and approvals identified in Paragraph 23 would be required. When applying the standards and criteria used in the determination of the need for an environmental impact statement, DNR finds that the project is subject to these regulatory authorities to an extent sufficient to mitigate potential environmental effects through measures identified in the EAW and Record of Decision.

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*.

   Additional Groundwater Technical Analysis as part of the DNR water appropriations permitting, is anticipated in 2022.

6. As set forth in Paragraphs 1 – 23 of this document, DNR has fulfilled all the procedural requirements of law and rule applicable to determining the need for an EIS on the Spruce Valley Gravel Pit Dewatering in Roseau County, Minnesota.

7. Based on consideration of the criteria and factors specified in the Minnesota Environmental Review Program Rules (*Minnesota Rules* part 4410.1700, subparts 6 and 7) to determine whether a project has the potential for significant environmental effects, and on the Findings and Record in this matter, the DNR determines the proposed Spruce Valley Gravel Pit Dewatering Project does not have the potential for significant environmental effects.

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 Spruce Valley Gravel Pit Dewatering Project located in Roseau County, Minnesota.

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

Dated this 27th day of December 2021

DEPARTMENT OF NATURAL RESOURCES

Jess Richards
Assistant Commissioner

Attachment A: Response to Comments

Comment ID	Last Name	First Name	Organization	Date Received	Category	Comment	Response
1	Etzel	Jim		9/21/2021	Non-Substantive	With Climate change, global warming, deforestation, water contamination, mass extinctions, habitat loss, maybe for once you can do the right thing and deny this project its permit and reclaim the land back to it's natural state. Do mother nature a favor and put money aside and do the right thing. DENY THE PERMITS and reclaim the land back to its natural state	Comment noted. This comment did not address the accuracy and completeness of the material contained in the EAW, impacts that may warrant further investigation before the project is commenced, or the need for an EIS as required by Minn. R. 4410.1600. Therefore this comment is not receiving a specific response. All persons that commented in writing will be provided with this Record of Decision. See Minn. R. 4410.1700, subp.5.
2a	Peterson	Todd	City of Roseau	9/23/2021	Water Quantity	Commentor notes during construction of the diversion channel nearby the U.S. Army Corps of Engineers encountered a flowing ground water aquifer at a level of between 12-15' deep as they cut the new channel. This puncturing of the ground water aquafer raised significant concerns with adjacent rural residents who obtained their residential water from shallow wells in the area, many wells in this area are only 20-25' deep. To alleviate concerns from the local residents the city has agreed to provide new wells in the event any existing shallow wells run dry in the vicinity of the diversion project.	Comment noted. This will be evaluated through the Water Appropriation Process, which will evaluate the hydrogeology of the site. If the water is appropriated and wells are impacted, then the well interference process can resolve the issue.
2b	Peterson	Todd	City of Roseau	9/23/2021	Non-Substantive	The City would have concerns about any obligation on its part for any wells that have issues following the pumping of the Sehlstrom Pit, particularly if the goal is to dewater the pit to an ultimate depth of 50' below grade, well below many of the existing wells in the area. The City of Roseau would want to be absolved of any liability or obligation for failing wells in the area of this project.	See response to comment 1
3a	Fevold	Rockford		9/27/2021	Water Quantity	Commentor expressed concern over well going dry.	See response to comment 2a
3b	Fevold	Rockford		9/27/2021	Noise	The noise is on another level the dig 7 days a week.no quality of life with the noise	Comment noted. Noise ordinances are typically regulated at the local level and the township/county should be contacted.
3c	Fevold	Rockford		9/27/2021	Wildlife	Commentor expressed for water fowl that use the pit.	Comment noted. The ponds in the gravel pit provide resting places for waterfowl, such as Canada geese, during migration and may offer escape cover for waterfowl broods during the summer. The gravel pit does not appear to be high quality waterfowl habitat. If the pit is dewatered, waterfowl will seek out other open water location on the landscape.
4	Jensen	Collin		9/27/2021	Water Quantity	Commentor mentioned they needed to drill a new well due to diversion construction and commentor expressed concern about well going dry.	See response to comment 2a
5	Skoglund	Melissa		9/30/2021	Water Quantity	Commentor expressed concern about their well going dry.	See response to comment 2a
6a	Grindahl	Raymond		10/1/2021	Water Quality	My water got real hard and bad tasting. It stayed that way for 3 years after they quit pumping	Comment noted. Statute 103G.287 specifies that proposed appropriations need to protect water quality. Water quality impacts will be assessed through the water appropriation permit process.
6b	Grindahl	Raymond		10/1/2021	Water Quantity	This was tried some years ago. It messed up many of the wells in the area. The water in the Sehlstrom pit is part of an aquifer that effects a large area around it. I live about 3 miles SE from the pit. It is my belief that the east water town in the town of Roseau is be impacted by this project.	See response to comment 2a

Comment ID	Last Name	First Name	Organization	Date Received	Category	Comment	Response
7a	Janzen	Jodie		10/5/2021	Water Quantity	Commentor is concerned about reduction in water flow and drying domestic wells	See response to comment 2a
7b	Janzen	Jodie		10/5/2021	Water Quantity	Commentor is concerned about impact on the reliability of the aquifer	See response to comment 2a
7c	Janzen	Jodie		10/5/2021	Water Quality	Commentor is concerned about water quality impacts	See response to comment 6a
7d	Janzen	Jodie		10/5/2021	Noise	Commentor expressed concern about noise pollution created by 24/7 pumping to keep pit dry	See response for comment 3d.
8a	Gregerson	Gary		10/8/2021	Water Quantity	Commentor noted that during the construction of the diversion in the next section north wells went dry due to the construction.	See response to comment 2a
8b	Gregerson	Gary		10/8/2021	Water Quantity	Commentor is concerned about losing water supply due to the pit dewatering.	See response to comment 2a
8c	Gregerson	Gary		10/8/2021	Water Quality	Commentor is concerned about water quality impacts	See response to comment 6a
9a	Walsh	Jim	MDH	10/18/2021	Water Quantity	As stated in the groundwater flow model document, the results only simulated 2-years' worth of pumping, and given the simplicity and uncalibrated nature of the model should be considered order of magnitude estimates that would benefit from confirmation monitoring. It is our understanding that dewatering took place during the construction of the diversion ditch in adjacent section 19. Consider evaluating any information available from that project regarding effects on nearby wells and how that information may apply to the current dewatering project proposal.	See response to comment 2a
9b	Walsh	Jim	MDH	10/18/2021	Water Quality	Arsenic can be elevated in the shallow aquifer tapped by the gravel pit and adjoining wells, as evidenced by the monitoring history at former public water supply facility New Adventure Childcare, now inactive. Their 55-foot deep well (unique number 467964), located approximately 1800 feet northwest of the gravel pit, showed arsenic values ranging from 7.03-8.33 µg/l from monitoring data spanning 1994-2008. These values are near the drinking water standard of 10 µg/l. It's possible that changes in groundwater flow dynamics or redox conditions related to groundwater withdrawals at the gravel pit could alter arsenic levels in groundwater locally, as well as alter values in surface waters receiving dewatering outflows	See response to comment 6a
10	Beimers	Sarah	SHPO	10/19/2021		There are no properties listed in the National or State Registers of Historic Plans, and no known or suspected archaeological properties in the area that will be affected by this project.	Comment noted.
11	Roos	Steve	MDA	10/20/2021	Water Quantity	We anticipate that during dry or drought conditions the need to dewater might be diminished and groundwater drawdown would be limited and not exacerbate dry conditions in neighboring agricultural fields	Comment noted.
12a	Kromar	Karen	MPCA	10/20/2021	Water Quality	If the existing DO is below the standard, the EAW should discuss what steps will the Project proposer take to bring the DO level up to the standard before discharging to the Roseau River.	Comment noted. Discharge water quality is regulated through the MPCA general permit.

Comment ID	Last Name	First Name	Organization	Date Received	Category	Comment	Response
12b	Kromar	Karen	MPCA	10/20/2021	Water Quality	Project proposer must ensure there is no erosion within the receiving waters as a result of the increased flows that could increase sedimentation within these streams, including the potential for stream bank erosion. The EAW should discuss monitoring plans and also address these potential offsite sediment impacts from the additional discharges. The quality of the dewatering water will need to be monitored to ensure no water quality impacts occur in the receiving waters and provide appropriate Best Management Practices (BMPs) as needed to prevent potential water quality impacts.	Comment noted. The Project would be designed and operated under the requirements of the MPCA's Nonmetallic Mining/Associated Activities General Permit MNG490000. Waters would be discharged to a control device to ensure that adequate treatment is obtained prior to leaving the project site. Monitoring plans and project specific BMPs would be developed as part of the Pollution Prevention Plan for the project as required by MNG490000 and potential requirements of the local Watershed District Permit in order to protect against sedimentation and potential stream bank erosion in receiving waters.
12c	Kromar	Karen	MPCA	10/20/2021	Noise	Dewatering and mining activities are subject to the state noise standards defined in Minn. R. ch. 7030. Although the proposed Project may be consistent with current land use and noise impacts are unlikely to change, care should be taken to ensure that operations and equipment meet the state standards, particularly at the closest residences. Mitigation recommendations, in addition to silencer boxes for the pumps, include ensuring that equipment is properly muffled and uses quieter backup alarms. Consideration should also be given as to which operations occur at night versus during the daytime, creating berms around the perimeter of the pit, and identifying setbacks for processing equipment (which may be less relevant if the equipment is recessed at the bottom of the pit).	See response for comment 3d.
13a	Nyhus	Larry		10/20/2021	Water Quantity	Commentor expressed concerned about their well going dry.	See response to comment 2a
13b	Nyhus	Larry		10/20/2021	Wildlife	Commentor expressed concern about loss of water fowl habitat	See response for comment 3c.
14	Norman	Brian		10/21/2021	Water Quantity	Commentor expressed concerned about their well going dry and mentioned their well went dry the last time the pit was pumped.	See response to comment 2a
15a	Tuttle	Robert		10/21/2021	Water Quantity	Commentor expressed concern about their well going dry.	See response to comment 2a
15b	Tuttle	Robert		10/21/2021	Water Quality	Commentor expressed concern about impacts to groundwater quality.	See response to comment 6a
15c	Tuttle	Robert		10/21/2021	Non-Substantive	Commentor expressed concern about financial impacts due to needing a new well or hooking up to city water.	See response to comment 1

DEPARTMENT OF NATURAL RESOURCES

Memo

Date: 12/23/2021

To: File

From: Anneka Munsell and Kate Fairman

RE: Attachment B: Spruce Valley Gravel Pit dewatering project – groundwater quality

During the public comment process for the Environmental Assessment Worksheet (EAW), multiple comments raising concerns about impacts to nearby wells were provided. These comments provided concerns related to impacts to water quantity (well water levels) and water quality (potential contaminants to nearby wells). Specifically, comments were provided by the Minnesota Department of Health indicating a concern that arsenic levels in nearby wells could increase due to fluctuating water levels in the aquifer as a result of water use by the proposed project. The potential increase in arsenic is uncertain, but fluctuating redox conditions, that can result from water level changes, have been shown to cause such an increase.

A number of shallow wells in the vicinity that are thought to draw from the same aquifer as the proposed gravel pit have shown elevated arsenic concentrations, some near or in excess of the drinking water standard. There is concern that water level fluctuations caused by the proposed dewatering could exacerbate these arsenic values, perhaps putting some currently acceptable wells over the standard or significantly increase arsenic concentrations. There are several domestic wells that might be impacted by this potential water quality change. As part of the water appropriation permit, domestic well water sampling and arsenic analysis should be included to document any potential change.

In addition to the hydrogeologic study assessing water quantity impacts additional analysis will be needed to address potential water quality impacts from the Spruce Valley Gravel Pit dewatering project.

The baseline water quality should be determined for each well that may be potentially impacted by the project using more than one sample per well. The sampling should not only measure baseline arsenic levels, but should also measure constituents that might impact the absorption, filtration, or other treatment methods for arsenic. The specific sampling schedule and requirements would be determined in coordination with Minnesota Department of Health. If water quality changes to where it is no longer within the drinking water standard or there are significant impacts to the baseline arsenic concentration then the permittee would need to pay to install and maintain a treatment unit for each well that is certified by NSF, Underwriter's Laboratory (UL), or Water Quality Association for arsenic reduction or other solution to restore the water quality to at least baseline conditions. In addition, pretreatment of water prior to arsenic removal unit may be required in order for arsenic to be effectively removed (i.e. iron, manganese, hardness removal). Furthermore, water testing should continue

for incoming well water and treated water to continue tracking dewatering project effects on arsenic and to assure the effectiveness of treatment and health protection.

As it is likely that a treatment system would include on-going costs, financial assurances should be included in the permit. This would ensure that domestic water users would not bear the financial burden of water quality changes due to commercial use of the water.

These conditions could be incorporated into the DNR Water Appropriations Permit. In the Record of Decision for the EAW, these regulatory controls and conditions will be described to ensure there is not potential for significant environmental effects.