University of Minnesota
UMore Park Sand and Gravel Resources

Scoping Environmental Assessment Worksheet

January 2009
January 12, 2009

Dear Colleague:

Attached please find a copy or copies of a Scoping Environmental Assessment Worksheet (EAW) and Draft Scoping Decision Document (Draft SDD) for the University of Minnesota’s UMore Park Sand & Gravel Resources Project. The project site is located in both the City of Rosemount and Empire Township in Dakota County, Minnesota. The University of Minnesota is proposing to open a new aggregate mine(s) and ancillary operations on approximately 1,711 acres of the UMore Park property. The current plan is to locate the proposed mining area on the approximate western one-third of the UMore Park property.

Copies of this letter, the Scoping EAW, and Draft SDD are being distributed to agencies on the current Minnesota Environmental Quality Board (EQB) document review list. It is also being distributed to additional recipients to inform the public and interested parties of the alternatives that will be carried forward for further review, and of analyses anticipated in the Draft Environmental Impact Statement (DEIS). The review and comment period required by the state of Minnesota will begin upon publication of the Scoping EAW and Draft SDD availability notice in the Monday, January 12, 2009 edition of the EQB Monitor. Comments will be accepted through Monday, February 16, 2009, and will be included in the official record. Comments – in writing – should be directed to:

Steven Lott
University of Minnesota
UMore Park
1605 West 160th Street
Rosemount, MN 55068
Phone: 651.423.2562
Fax: 651.423.1491
E-mail: lottx020@umn.edu

To afford an opportunity for all interested parties, agencies and groups to comment on the proposed action, a public scoping meeting will be held on Thursday, February 5, 2009, from 6 p.m. to 8 p.m. at the Rosemount Community Center located at 13885 South Robert Trail in Rosemount, Minnesota. A project presentation will be held at 6:30 p.m. Members of the project team will be available preceding and following the presentation to provide individual assistance. Comments may be submitted in writing, or verbally on the evening of Feb. 5 to a court reporter. The comments received will be considered in determining the scope of the environmental document.

The above referenced documents are available in alternative formats to individuals with disabilities by calling Steven Lott. Individuals who are hearing or speech impaired should call the Minnesota Relay Service at 1-800-627-3529. Individuals with a disability who need a reasonable accommodation to participate in the public meeting should call Steven Lott at the phone number listed above or the Minnesota Relay Service at 1-800-627-3529 as soon as possible.

Thank you for your interest in the UMore Park Sand & Gravel Resources Project.

Sincerely,

Charles C. Muscoplat
Vice President

Driven to DiscoverSM
**ENVIRONMENTAL ASSESSMENT WORKSHEET**

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the EQB Monitor. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. **Project Title:** University of Minnesota UMore Park Sand and Gravel Resources Project

2. **Proposer:** Board of Regents of the University of Minnesota

   **Contact Person:** Steven Lott

   **And Title:** Project Manager

   **Address:** UMore Park
   1605 160th Street West
   Rosemount, MN 55068455

   **Phone:** 651.423.2562

   **E-mail:** Lottx020@umn.edu

3. **RGU:** Board of Regents of the University of Minnesota

   **Contact Person:** Steven Lott

   **And Title:** Project Manager

   **Address:** UMore Park
   1605 160th Street West
   Rosemount, MN 55068

   **Phone:** 651.423.2562

   **E-mail:** Lottx020@umn.edu

4. **Reason for EAW Preparation:**

<table>
<thead>
<tr>
<th>EIS</th>
<th>Scoping</th>
<th>Mandatory</th>
<th>Citizen</th>
<th>RGU</th>
<th>Discretion</th>
<th>Proposer</th>
<th>Volunteered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

   If EAW or EIS is mandatory give EQB rule category subpart number and name: **4410.2100 Subp. 2**

5. **Project Location:**

   **County:** Dakota

   **City/Twp:** City of Rosemount Empire Township

   **Section:** 3 and 4

   27, 28, 33, and 34

   **Township:** 114N

   **Range:** 19W

*Tables, Figures, and Appendices attached to the EAW:*
- County map showing the general location of the project (Figure 1);
- United States Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable) (Figure 2);
- Site plan showing all significant project and natural features (Figure 3);
- Potential Sites of Concern (Figure 4).
6. Description:

a. Provide a project summary of 50 words or less to be published in the EQB Monitor.

A detailed notice summarizing the proposed project will be published in the EQB Monitor.

b. Give a complete description of the proposed project and related new construction. Attach additional sheets as necessary. Emphasize construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes. Include modifications to existing equipment or industrial processes and significant demolition, removal or remodeling of existing structures. Indicate the timing and duration of construction activities.

The University of Minnesota is proposing to open new aggregate mines and ancillary operations, hereafter referred to as the “UMore Park Sand and Gravel Resources Project”, on approximately 1,711-acres of the UMore Park property located in the City of Rosemount and Empire Township, Dakota County, Minnesota, hereafter referred to as the “UMore Mining Area” (see Figures 1, 2, and 3). The UMore Mining Area is part of the University of Minnesota Outreach, Research, and Education Park (UMore Park) that has been owned and operated by the University of Minnesota since the late 1940's.

Mining operations and practices on the UMore Mining Area are proposed to be similar to current aggregate extraction practices at existing mines adjacent to and near the UMore Mining Area.

Ancillary operations refer to production activities which are associated with either the mining and/or reclamation processes or to the production of some other product using the aggregate produced as an essential component. Throughout this Scoping EAW, reference may be made to specific ancillary operations, but those references are not intended to restrict the operations to the referenced items or possibly other operations. The anticipated mining and ancillary operations include, but are not limited to, the following:

**Mining and Aggregate Processing**
- Clearing and grubbing the site of vegetation and structures, as necessary.
- Removal and/or relocation of infrastructure, as necessary.
- Excavation, stockpiling, and transporting of soils materials, including clay and topsoil, which may be present within the UMore Mining Area for shipment to sites out of the area or for use in future reclamation.
- Excavation and transport of the raw aggregate materials within the site.
- Washing, grading, and stockpiling aggregate materials for sale or later internal use.
- Transporting and stockpiling non-aggregate materials for potential later use in reclamation.
• Transporting finished aggregate materials internally for subsequent processing and to construction sites beyond the UMore Mining Area.

• Transporting, accepting, and stockpiling clean, compactable fill materials and/or clean organic soil materials for potential later use in reclamation.

• Eventual redistribution, compacting, grading of overburden and clean fill materials to reclaim the disturbed portions of the UMore Mining Area.

Ancillary Manufacturing
• Manufacture and transport of various asphalt products.

• Manufacture, stockpiling, warehousing and transporting of ready-mixed concrete, bagged mortar products, concrete block, concrete pavers, concrete pipe, concrete plank, etc.

• Importing, grading, processing, and stockpiling aggregates to be blended with local aggregates in the production of various products which will increase the effective use of the local aggregates and extend the life of the natural resource.

• Transporting, accepting, and recycling products returned from construction sites, including ready-mixed concrete, bagged mortar products, concrete block, concrete pavers, concrete pipe, and concrete plank for inclusion in new products.

General Operations and Administrative
• Offices and sales facilities.

• Equipment storage and maintenance facilities.

• Fuel storage and refueling facilities.

The mining season typically extends from late March through mid December each year and occasionally starts earlier and runs later. Topsoil and overburden stripping is the first step. Initially, as operators begin mining, each open mine may require the stripping of a few dozen acres to provide space for offices, shops, parking, manufacturing facilities, stockpiles, processing and the actual mining face. Then, as the aggregate is harvested and the mine face advances, additional acreage will be stripped. This will be accomplished using several pieces of earth moving equipment including dozers, scrapers, backhoes and haul trucks.

Once the topsoil and overburden is removed and either used for reclamation or stockpiled, extraction of the mineral deposit can begin. The equipment that will be used for extraction will include large front end loaders, backhoes, drag lines, dredges, crushers, screens and conveyor systems. The raw reserves are then transported via a conveyor system or haul trucks to either a dry plant or a wash plant. At the plant the material is fed through a series of crushers, screens, conveyors, wash decks and classifiers to produce the commercial grade construction aggregates. The finished products are stockpiled adjacent to the plant and sold to contractors for construction jobs. The finished products are hauled off site by trucks to the various construction
sites, or internally transported and stockpiled for subsequent production of the various ancillary products (asphalt, concrete, etc.).

Water will be consumed in the operation to wash the aggregate, clean equipment and suppress dust. It will also be used as an ingredient in the production of the various concrete products. Each operator will require a source of process water that may be secured with a well and/or efficient recycling of water, including storm water runoff, through sedimentation ponds.

The proposed mining operation(s) will result in the lowering and a reconfiguration of the surface topography, and some modifications to the existing surface drainage system.

In general, reclamation will progress in increments. In the first several years, however, as new mines are opened and plant sites are developed, relatively little reclamation will occur. Exhausted areas of mine floor may have a status of "interim reclamation" since it will be necessary to maintain and relocate conveyor systems and/or haul routes between the mine face and processing. Final reclamation efforts would come once the transport is no longer necessary in that area. The perimeter of the UMore Mining Area will be reclaimed at a slope of three to one or flatter. The reclaimed mine floor will undulate according to the bottom of the deposit and will include some new surface water bodies in the locations of the deepest deposits. Except for these new surface water areas, upon completion of reclamation the end use of the UMore Mining Area property will be suitable for agricultural use.

Operators on the site may also produce asphalt, ready-mixed concrete and a variety of the ancillary products. Each of these construction materials plants will be located in close proximity to the aggregate processing plants to eliminate unnecessary handling and hauling. Ready-mixed concrete production requires a plant capable of storing and mixing the ingredients for the various mix designs. Ready-mix plant sites will have storage silos for the cementacous materials; storage tanks for the liquid additives and will have an area for handling comeback concrete and truck wash out. These plants require staging and traffic flow areas for trucks.

Standard industry practice is to allow for the on-site recycling of concrete surplus returned from other jobsites, as well as, defective or surplus concrete and asphalt products manufactured on-site. In addition, customers are allowed to bring in clean concrete and asphalt construction debris which is stockpiled before being processed by a portable crushing plant into an aggregate base product. On-site clays or sands may be blended in with the imported materials. The rubble frequently contains steel reinforcing bars, pre-stress cables and polystyrene insulation. The recycling crew will collect any steel separately and send it to a metal recycling facility. Waste materials such as polystyrene, wood and plastic are collected in waste dumpsters and sent to a properly licensed landfill.

It is standard industry practice to allow limited import of clean fill materials. These may be sands, clays, peaty materials or other non-compactable materials that are removed from the construction job-site to which the aggregates and ancillary products are being shipped. Some imported fill is stored and then subsequently sold in its original condition.
or as a blend with other on-site material. In other cases the imported fill can be used as part of the pit restoration process.

Other concrete product manufacturing plants will have similar needs to ready-mixed plants, except they often require a larger plant footprint and substantial outside storage.

Asphalt plants will require areas for liquid storage tanks for the various ingredients of their mix designs. These would include tanks for asphalt cement, tack oil, and heating oil.

**Proposed Treatment of Topic in EIS**

The EIS will include a complete project description.

c. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The purpose of the project is to make cost-effective and environmentally-sound usage of regionally significant aggregate resources located within the UMore Mining Area and generate revenues to support the mission of the University. Beneficiaries of the project will include the construction industry in the Twin Cities Metropolitan Area and surrounding regions because a local supply of aggregate and other manufactured products will limit the distance these products will need to be transported resulting in lower costs.

**Proposed Treatment of Topic in EIS**

The EIS will include a complete project purpose and need statement.

d. Are future stages of this development including development on any outlots planned or likely to happen? [ ] Yes [ ] No If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

The entire UMore Park property consists of approximately 5,000 acres and the UMore Mining Area comprises approximately 1,711 acres of that total (see Figure 3). Based on an aggregate exploration study conducted for the entire UMore Park property, there are available gravel resources outside of the UMore Mining Area. These areas have not been included in this EIS due to the extraordinarily large quantity of aggregate resources within the UMore Mining Area and the estimated length of time it will likely take to mine; likely several decades. The University has not determined whether they will pursue gravel mining elsewhere on the UMore Park property at some point in the future. The University is committed is continuing to assess the portion of the 5,000 acre UMore Park property not included in the UMore Mining Area for potential environmental impacts to soil and determine whether any issues exist that may require soil remediation strategies.

All future stages and/or developments on the UMore Park property will be subject to local, state, and federal environmental reviews where potential impacts to natural resources will be evaluated.
e. Is this project a subsequent stage of an earlier project?  Yes  No  If yes, briefly describe the past development, timeline and any past environmental review.

7. **Project Magnitude Data**

<table>
<thead>
<tr>
<th>Total Project Area (acres)</th>
<th>Approx. 1,711 acres within study area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Residential Units:</td>
<td>Unattached  Attached  Max. units per building</td>
</tr>
<tr>
<td>Commercial/Industrial/Institutional Building Area (gross floor space):</td>
<td>Total square feet</td>
</tr>
</tbody>
</table>

Indicate area of specific uses (in square feet):

| Office | N/A |
| Retail | N/A |
| Warehouse | N/A |
| Light Industrial | N/A |
| Other Commercial (specify) | N/A |
| Building height | N/A |

Heights of nearby buildings do not typically exceed two stories, except for the Dakota County Technical College which has buildings exceeding two stories. In addition, the existing mining operations south of the study area have equipment and material stockpiles that extend more than 20-30 feet above ground level. The UMore Park Gravel Mining Project anticipates similar equipment and material stockpiles once aggregate extraction operations commence within the study area.

8. **Permits and approvals required.** List all known local, state and federal permits, approvals and financial assistance for the project. Include modifications of any existing permits, governmental review of plans, and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure.

Table 1 lists potential permits and approvals that may be required for the project.

### Table 1
**Potential Agency Approvals and Permits**

<table>
<thead>
<tr>
<th>Government Agency</th>
<th>Type of Approval or Permit</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Minnesota</td>
<td>EIS Record of Decision</td>
<td>To be obtained</td>
</tr>
<tr>
<td>Minnesota Pollution Control Agency</td>
<td>NPDES Permit, Remedial Action Plan(s) for Site(s) of Concern</td>
<td>To be obtained as necessary</td>
</tr>
<tr>
<td>Minnesota Department of Natural Resources</td>
<td>Water Appropriations Permit</td>
<td>To be applied for by individual operators, as necessary</td>
</tr>
<tr>
<td>SHPO</td>
<td>Coordination</td>
<td>To be obtained as necessary</td>
</tr>
<tr>
<td>Office of the State Archaeologist</td>
<td>License for work on public land. Consultation if archaeological sites found in project area</td>
<td>To be obtained as necessary</td>
</tr>
<tr>
<td>City of Rosemont</td>
<td>City Street Change Approvals, Comprehensive Plan Amendment &amp; Zoning Change, Storm water permit/approval</td>
<td>To be obtained as necessary</td>
</tr>
<tr>
<td>Government Agency</td>
<td>Type of Approval or Permit</td>
<td>Status</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>City of Rosemount</td>
<td>Individual Sewage Treatment System</td>
<td>To be applied for by individual operators</td>
</tr>
<tr>
<td></td>
<td>Conditional Use Permit – Mineral Extraction</td>
<td>To be applied for by individual operators</td>
</tr>
<tr>
<td></td>
<td>Utility Permits</td>
<td>To be obtained as necessary</td>
</tr>
<tr>
<td></td>
<td>Wetland Replacement Plan</td>
<td>To be applied for portion of study area in the City, as necessary</td>
</tr>
<tr>
<td>Empire Township</td>
<td>Comprehensive Plan Amendment &amp; Zoning Change</td>
<td>To be applied for portion of study area in Township</td>
</tr>
<tr>
<td></td>
<td>Township Road Change Approval</td>
<td>To be obtained as necessary</td>
</tr>
<tr>
<td></td>
<td>Interim Use Permit – Mineral Extraction</td>
<td>To be applied for by individual operators</td>
</tr>
<tr>
<td></td>
<td>Individual Sewage Treatment System</td>
<td>To be applied for by individual operators</td>
</tr>
<tr>
<td>Dakota County</td>
<td>County Road Change Approvals</td>
<td>To be obtained as necessary</td>
</tr>
<tr>
<td></td>
<td>Fuel Storage Permit</td>
<td>To be applied for by individual operators</td>
</tr>
<tr>
<td></td>
<td>Wetland Replacement Plan</td>
<td>To be applied for portion of study area in the Township, as necessary</td>
</tr>
<tr>
<td></td>
<td>Hazardous Waste Generator's License</td>
<td>To be applied for by individual operators</td>
</tr>
<tr>
<td></td>
<td>Water Well Permit</td>
<td>To be obtained as necessary</td>
</tr>
<tr>
<td></td>
<td>Well Sealing Permit</td>
<td>To be obtained as necessary</td>
</tr>
<tr>
<td>Dakota County Soil &amp; Water Conservation District</td>
<td>Storm water permit/approval</td>
<td>To be obtained as necessary</td>
</tr>
<tr>
<td>Vermillion River Watershed Management Organization</td>
<td>Coordination</td>
<td>Ongoing</td>
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<tr>
<td></td>
<td>Land Alteration Review</td>
<td>To be completed by individual operators</td>
</tr>
<tr>
<td>Utility Companies</td>
<td>Utility Relocations or Vacation of Existing Easements</td>
<td>To be applied for by individual operators</td>
</tr>
</tbody>
</table>

* All local government and agency regulatory provisions are subject to and tempered by the legal status of the University of Minnesota as an autonomous constitutional corporation.

**Proposed Treatment of Topic in EIS**

The EIS will include a list of all potential agency approvals and permits potentially required for the project.

9. **Land use.** Describe current and recent past land use and development on the site and on adjacent lands. Discuss project compatibility with adjacent and nearby land uses. Indicate whether any potential conflicts involve environmental matters. Identify any potential environmental hazards due to past site uses, such as soil contamination or abandoned storage tanks, or proximity to nearby hazardous liquid or gas pipelines.

**Existing Land Uses**

The UMore Mining Area is part of the University of Minnesota Outreach, Research and Education Park, (UMore Park) that has been owned and operated by the University of Minnesota since around 1948. The entire UMore Park encompasses nearly 5,000 acres in
the City of Rosemount and Empire Township. Existing land use patterns for UMore Park within the two jurisdictions have been similar or consistent with one another over the years. The University of Minnesota has used the land for educational outreach programs, research, agricultural production, and to a more limited extent, recreational activities. The site proposed for gravel mining (UMore Mining Area) and subject to this Scoping EAW encompasses approximately 1,711 acres. The UMore Mining Area is within a regionally significant deposit of gravel and sand resources in Dakota County. This was documented in the *Aggregate Resources Inventory of the Seven County Metropolitan Area Minnesota (Metropolitan Council and the University of Minnesota), 2002.*

UMore Park, including the UMore Mining Area, was formerly a federally-owned property. In March 1942, the federal government acquired approximately 12,000 acres of privately farmland in Dakota County to serve as the site of the Gopher Ordnance Works (GOW). The GOW was a government-owned, contractor operated manufacturing facility built to produce smokeless gunpowder and related products for use by the United States Navy and Army. Construction on GOW started in 1943 and was never completed. A portion of GOW became operational in late 1944 and went into production in early 1945. All powder production activities ceased shortly after the war ended in August 1945. The GOW was declared “surplus property” by the federal government in 1946. The University acquired approximately 8,000 acres of the former GOW from the federal government in 1947 and 1948 for research and educational purposes. A majority of the UMore Mining Area is located within the parcel acquired in 1947, which was comprised largely, but not exclusively, of undeveloped farmland. Relatively small portions of the UMore Mining Area have been identified as Sites of Concern (SOC) related to the development of the former GOW.

Regardless of ownership, the property has been consistently used for agricultural production and University faculty research. The University of Minnesota continues to own and operate the UMore Mining Area for research and agricultural purposes.

**Adjacent Land Uses & Compatibility**

Areas of traditional suburban growth have emerged over the last twenty years near the UMore Mining Area, particularly to the north and west in the City of Rosemount. On a more regional scale, this development pattern is consistent with much of central Dakota County. Undeveloped land guided for future urban commercial development is located to the north and east of the site. All remaining adjacent land uses are of an agricultural or farmstead use including the area of UMore Park east of the proposed mining area.

The EIS will address adjacent land uses within the City of Rosemount and Empire Township. The existing land uses within UMore Park are consistent with the UMore Park Sand and Gravel Mining Project and will no longer be further studied as part of the EIS. However, adjacent land uses that are not within UMore Park will be evaluated for compatibility.

**City of Rosemount**

Within the City of Rosemount, adjacent land uses within a half-mile of the UMore Mining Area include typical suburban residential neighborhoods, a developing business park and some industrial areas. The residential neighborhoods are located north of the proposed
UMore Mining Area and are comprised of approximately 550 single-family residential dwelling units and 350 townhomes. Also located within a half-mile of the UMore Mining Area are a few storage facilities, offices, service shops, and a convenience store.

Residential uses are not typically considered a compatible land use with mining operations. Dakota County State Aid Highway (CSAH) 42, a four-lane divided highway serves as a buffer between the residential developments and the northern limits of the UMore Mining Area. The Union Pacific Railroad tracks also serves as an additional buffer to the residential neighbors located further north.

A business park and general industrial land use pattern is located adjacent to the UMore Mining Area on the western edge of the site between 145th Street and 160th Street. The business park encompasses approximately 415 acres and currently includes approximately 540,000 finished square feet of manufacturing, office, warehousing, storage, and industrial space. Biscayne Avenue serves as a buffer between these developments and the western limits of the UMore Mining Area.

**Empire Township**

The UMore Mining Area is located adjacent to the “Mineral Extraction Overlay” zoning district as defined in the Empire Township Zoning Code. The district was established to provide a plan and regulatory base for landowners and mining operators looking to expand aggregate mining areas within Empire Township. The overlay district has been expanded to include the UMore Mining Area under the Township’s 2030 Comprehensive Plan Update. This is discussed in further detail under question #27 of this Scoping EAW. The overlay zoning district in place today encompasses approximately 3,600 acres for mining purposes in Empire Township.

Within Empire Township, land uses adjacent to the UMore Mining Area include primarily agricultural and gravel mining. There are approximately 13 single-family residential dwelling units (farmstead or homesteads) within a half-mile of the UMore Mining Area.

**Potential Environmental Hazards**

The majority of the UMore Mining Area has historically been used as open space and farmland. A relatively small portion of the land within the UMore Mining Area was used to support the former GOW and/or other industrial uses that may have the potential for releases of hazardous substances to the environment.

Table 2 provides a summary of potential Sites of Concern (SOCs) within the UMore Mining Area that will be evaluated as part of the environmental review for evidence of past releases of hazardous substances. The investigation will be conducted in accordance with the Phase II Investigation Work Plan to be approved by the Minnesota Pollution Control Agency. Figure 4 depicts approximate locations of these SOCs as well as other potential environmental hazards, such as pipelines, near the UMore Mining Area.

Potential releases attributable to the former GOW that are within proximity of the UMore Mining Area include the former DNT storage bunkers located in what is now the Central Services Complex (Figure 4). Limited investigation of this location was previously conducted by the US Army Corps of Engineers (BayWest 2008). Concentrations of several
parameters in shallow soil (less than 4 feet) were determined to have resulted from past activities in this area. Concentrations of polycyclic aromatic hydrocarbons (PAHs) were measured above the risk screening thresholds used in the investigation. The insecticide dieldrin was also found in shallow soils in the northern portion of the Central Services Complex.

The SOCs in Table 2 include several sites where petroleum and agricultural spills were previously investigated, cleaned up and closed by the MPCA and/or the MN Department of Agriculture. These sites may be further evaluated were present in SOCs, but are not likely to cause substantial impacts with respect to gravel mining operations.

The existing soil impacts, where present in the UMore Mining Area will be managed and/or removed in accordance with MPCA rules and guidance.

**Proposed Treatment of Topic in EIS**

The EIS will verify and summarize the existing land uses identified within the UMore Mining Area. The EIS will also address existing land uses adjacent to the site within a half-mile buffer area to the north, west, south, and east of the site. This half-mile buffer will serve as a guideline to evaluate land use compatibility and identifying environmental impacts within an area of potential impact resulting from the proposed gravel mining operations and ancillary uses. No additional analysis is planned for the EIS regarding the description of land uses within the project area. A series of mitigation strategies will be explored to avoid and minimize impacts from gravel mining operations on land uses within the area of impact.

The EIS will describe the University's plans to conduct a Phase II Investigation within the SOCs shown on Figure 4. The Work Plan for the Phase II Investigation, to be approved by the MPCA, will identify sampling locations and methods that will be used to define the extent of potential soil and groundwater impacts. The EIS will also include a discussion of mitigation measures that may be employed to address soil and groundwater impacts should remedial action be necessary.

<table>
<thead>
<tr>
<th>10. Cover Types. Estimate the acreage of the site with each of the following cover types before and after development:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Types 1-8 wetlands</td>
</tr>
<tr>
<td>Wooded/forest</td>
</tr>
<tr>
<td>Brush/grassland</td>
</tr>
<tr>
<td>Cropland</td>
</tr>
</tbody>
</table>

If Before and After Project Area totals are not equal, explain why:

The cover type information presented above is based on a review of the Minnesota Land Cover Classification System (MLCCS). The acreages presented above are intended to provide a generalized summary of cover types, but are not representative of exact quantities/acreages for the UMore Mining Area.
Table 2 UMore Mining Area Sites of Concern (SOCs)

<table>
<thead>
<tr>
<th>SOC</th>
<th>Name</th>
<th>Description</th>
<th>Previously Identified Site</th>
<th>Potentially Affected Media</th>
<th>Constituents of Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 1</td>
<td>Former Railroad “Y”</td>
<td>Heavy gauge railroad junction was a gateway for delivery of construction and raw material supplies for manufacture of smokeless gunpowder. Outbound shipments of manufactured gunpowder, oleum, and nitric acid. During GOW decommission, salvaged materials would have been shipped out along the rails.</td>
<td>Barr Site ID# 6001. Was visited by Army but not included in scope of Focused Site Investigation. No previous investigations.</td>
<td>Soil &amp; Groundwater</td>
<td>SVOC/PAH from railroad ties. Possible spills from railcars including SVOCs (DNT, DBP, DPA), NC, VOCs. Possible use of arsenic-herbicides along tracks.</td>
</tr>
</tbody>
</table>
| SOC 2| Forestry Research                         | Wooded area transected by the railroad south of the “Y”.
GOW era loading platform/storehouses located south of the GOW lumber yard. The area appears to have disturbed ground on the 1945 air photo and scattered concrete/brick fragments were observed at the surface during 2008 field visit. RR ties in woods. | Barr Site ID# 6004 and ID# 6005, Dakota County Site ID# 5262 and ID# 5263. Storage buildings 126-T, 127-T1, T2, and S-7-1. No other investigations. | Soil                                                               | ACM, SVOCs, metals                                             |
| SOC 3| Ag Engineering/Former “K” Street Dump     | Former Kane farmstead. West and central sides of the Ag Engineering Complex. University staff indicate the well in building 1010 is non-potable. East central includes a former animal waste lagoon and associated outlet structures and east side is former dump. Dump area is currently wooded with visible rubble. Was borrow area for GOW; appears to have been filled with demolition debris. | Barr Site ID# 6014, Dakota County Site ID# 5225. Possibly associated with LEAK 7504, no known previous investigations. | Soil & Groundwater                                                   | ACM, pesticides, herbicides, metals, SVOCs (including DNT, DBP, DPA) |
| SOC 4| Former DNT Loading Platform and Drainage Ditch | Loading platform received barrels of DNT by rail, transferred to trucks, then hauled to storage bunkers. Drainage to south flows to large ditch, which traverses field to southwest and meets with drainage from SOC 5. | Bldg 260, drainage south was sampled in 2008 and was non-detect for explosives. No other parameters analyzed. | Soil & Groundwater                                                   | NC, metals, SVOCs (including DNT, DBP, DPA)                   |
| SOC 5| Central services/Former DNT Storage Bunkers and Dry Wells | Release of DNT noted in drains that lead to dry wells inside Buildings 263-A, E, and F. Previous investigation in 2008 detected DNT, PAHs, Dieldrin, metals, and petroleum in soils. GRO and low level PAHs detected in groundwater. Previous pesticide and petroleum releases cleaned up and closed, but residual soil or groundwater impacts may be present. | Dakota Co. Site ID# 5705, ID# 5012, DNT storage bunkers are Bldgs 263 A-H; PAH concentrations appear limited to surface soil (<6”). | Soil & Groundwater                                                   | NC, herbicides, pesticides, metals, SVOCs (including DNT, DBP, DPA), VOCs |
| SOC 6| Southern Complex Storage Buildings and Wash Pads | Pesticide release sites closed (2002). University staff suspect that impacts may remain.                                                                                                                     | Barr Site ID# 6006, Dakota County Site ID# 5874                                               | Soil & Groundwater                                                   | Pesticides, herbicides                                      |
| SOC 7| Former Dairy Complex Suspected Dump Area   | Suspected dump area. Some evidence of concrete and plastic in surface soils.                                                                                                                                 | Dakota County Site ID# 5152 (in 2006 Peer Phase I)                                            | Soil                                                               | ACM, metals, SVOCs                                           |

ACM - Asbestos-containing material
DNT - 2,4-dinitrotoluene and 2,6-dinitrotoluene, a type of SVOC used as a burn rate modifier for smokeless gunpowder (NC)
DPA - Diphenylamine, an SVOC used as a stabilizer added to smokeless gunpowder
DBP - Di-n-butyl Phthalate, an SVOC used as a plasticizer for smokeless gunpowder
NC - Nitrocellulose, smokeless gunpowder or gun cotton. A single base explosive and propellant
PAH - Polycyclic Aromatic Hydrocarbons, a type of SVOC
SVOCs - Semivolatile Organic Compounds
VOCs - Volatile Organic Compounds
Proposed Treatment of Topic in EIS

The EIS will provide discussions of more detailed cover types within their respective sections, where applicable. For example, changes in the acres of cropland on the site will be discussed in the Farmland section of the EIS. Cover types that do not exist within the study area, and will not result from the proposed project, will not be discussed in the EIS (e.g. urban/suburban land/landscaping). The proposed mining plan will be utilized to determine areas for gravel extraction, areas that may remain unaltered, stormwater ponding sites, and potential impervious surfaces (buildings and roadways).

11. Fish, Wildlife, and Ecologically Sensitive Resources.

   a. Identify fish and wildlife resources and habitats on or near the site and describe how they would be affected by the project. Describe any measures to be taken to minimize or avoid impacts.

   Intensive agricultural use within the UMore Mining Area has extensively altered the pre-European settlement plant communities. The site is dominated by cropland interspersed with hedgerows, outbuildings/research facilities, patches of planted/cultivated woodland/forest, and grasslands dominated by non-native species. In the northern portion of the UMore Mining Area there are a few patches of remnant prairie forb species surviving where soils have restricted tree growth.

   The cropland on the site has limited habitat value, although it can provide nesting and foraging habitat for common species such as white-tailed deer, raccoons, blue jays, horned larks, savannah sparrows, red-winged blackbirds, and common grackles. The wooded/forested areas and hedgerows provide habitat for mammals and birds including: white-tailed deer, eastern moles, raccoons, foxes, skunks, squirrels, blue jays, crows, black-capped chickadees, downy woodpeckers, hairy woodpeckers, and white-breasted nuthatches. The wood lots also provide stopping points for neo-tropical migrating birds, such as wood warblers and vireos. The grassland areas provide habitat for pocket gophers, meadow voles, savannah sparrows, and eastern meadowlarks, in addition to providing foraging habitat for red-tailed hawks. Field edges provide habitat for eastern phoebes, northern cardinals, goldfinches, chipping sparrows, and field sparrows. In general, wildlife species that require large blocks of natural habitat or native habitat that is in good condition are not found within the proposed UMore Mining Area.

   The project is expected to impact all habitat areas on site. Impacts will be described in terms of potential effects that are direct (i.e., habitat loss and direct mortality) and indirect (e.g., noise, dust). Mitigation measures will be proposed as part of the reclamation plan.

Proposed Treatment of Topic in EIS

The EIS will include a discussion of existing ecological resources (including flora, plant communities, fauna, and wildlife habitat) and impacts of habitat changes on Species in Greatest Conservation Need (SGCN) as defined by the MNDNR. Habitat availability for SGCN species will be evaluated. The level of impact to SGCN species will be described on the basis of species presence and status of habitat on the project site and in the region.
b. Are any state (endangered or threatened) species, rare plant communities or other sensitive ecological resources such as native prairie habitat, colonial waterbird nesting colonies or regionally rare plant communities on or near the site? ☑ Yes ☐ No

If yes, describe the resource and how it would be affected by the project. Indicate if a site survey of the resources has been conducted and describe the results. If the DNR Natural Heritage and Nongame Research program has been contacted give the correspondence reference number. **ERDB 20090153**

Describe measures to minimize or avoid adverse impacts.

The Minnesota Natural Heritage Information System: Rare Features Database was queried for any occurrences of rare plants, animals or communities within one mile of the UMore Mining Area. Two occurrences of Loggerhead Shrike (*Lanius ludovicianus*) and one occurrence of a mesic prairie were identified. Additionally, a Blanding's Turtle (*Emydoidea blandingii*) record was reported just over a mile from the site.

**Loggerhead Shrike (*Lanius ludovicianus*)**

Loggerhead Shrike is a state threatened species, although globally it is considered apparently secure. It has been declining in North America since the 1960's particularly in the north-central (including MN) and northeastern portions of its range. While a part of its decline is due to habitat loss from development and reforestation, the extent of its decline cannot be fully explained by current knowledge.

1. Other possible explanations include increased pesticide use, road kills, changes in farming practices that result in fewer isolated trees, shrubs and fences,
2. and reduction in quality of wintering habitat. Many areas of seemingly suitable habitat are unoccupied, so it seems unlikely that habitat is the limiting factor in Minnesota.

Loggerhead Shrike is a territorial bird that utilizes cropland, hedgerow, old-field, grassland and savanna habitats. It nests in isolated trees, hedgerows, or open woodlands, and requires suitable hunting perches (often poles, wires & fence posts) as part of its territory. It feeds primarily on large insects, but its diet also includes other invertebrates, small birds, lizards, frogs and rodents, and has been known to scavenge. It utilizes barbed food storage locations such as thorny bushes and barbed wire fences on which it skewers its prey.

Loggerhead Shrike has known occurrences within a one-mile radius of the project boundary. The last confirmed sighting of loggerhead shrikes near the UMore Mining Area was in 1998. Another, more distant site, has records as recent as 2007. While Loggerhead Shrikes do sometimes nest in the same site in successive years, return

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rates are typically low. Males are more likely to return to their territory than females.1

**Mesic Prairie**

Mesic prairie remnants occur to the south and west of the UMore Mining Area. Mesic prairie is a grassland native to Minnesota that has moderate moisture levels. It is dominated by tall grasses such as big bluestem and Indian grass that grow up to six feet tall, and contains a high diversity of forb species. A mesic to dry-mesic grassland that contained prairie plants was found within the UMore Mining Area. Other than this grassland, no intact prairie remnant was found on the site.

**Blanding’s Turtle**

A Blanding’s Turtle (*Emydoidea blandingii*) occurrence was identified just over a mile to the southeast of the UMore Mining Area. The Blanding’s Turtle is a state threatened species and is declining in most of their range. These turtles inhabit freshwater ponds and marshes for most of the year, and the females travel to adjacent sandy soil areas to lay eggs. Females can travel a substantial distance (200-400m) to lay eggs.4 Blanding’s Turtles have not been observed within the UMore Mining Area.

**Vermillion River**

The UMore Mining Area is located in the watershed of the Vermillion River, a MNDNR designated trout stream with naturally reproducing brown trout. Alterations in groundwater recharge patterns could impact the trout stream biota, including brown trout. There is no direct surface water connection between the UMore Mining Area and the Vermillion River.

**Proposed Treatment of Topic in EIS**

The EIS will address impacts of the project on state threatened and endangered species, rare plant communities and sensitive ecological resources including: Loggerhead Shrike (*Lanius ludovicianus*), Mesic Prairie, Blanding’s Turtle (*Emydoidea blandingii*), and the Vermillion River trout stream.

The EIS will use species range and distribution maps, scientific literature, and site survey information to determine whether these resources are present in the UMore Mining Area, and if present, the extent of and potential impact to the resource. Data will be organized in a GIS database. Potential impacts to these species will be described at both a local and regional level.

Potential direct and indirect impacts to the Vermillion River trout stream will be evaluated by using stormwater and groundwater modeling (described in other sections of this Scoping EAW) and by reviewing existing literature and data pertaining to the trout stream.

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12. Physical Impacts on Water Resources. Will the project involve the physical or hydrologic alteration (dredging, filling, stream diversion, outfall structure, diking, and impoundment) of any surface waters such as a lake, pond, wetland, stream or drainage ditch? ☒ Yes ☐ No

If yes, identify water resource affected. Describe alternatives considered and proposed mitigation measures to minimize impacts. Give the DNR Protected Waters Inventory (PWI) number(s) if the water resources affected are on the PWI.

Surface water resources expected to be physically impacted by the proposed project consist solely of wetlands. No streams and no designated Public Waters Inventory (PWI) Basins (lakes and wetlands) are present within the UMore Mining Area.

In September 2008, wetlands were delineated on the site; however, regulatory concurrence regarding these wetland delineations has not been reached at this time. The following data was consulted as part of the delineation process: U.S. Fish & Wildlife Service National Wetlands Inventory (NWI), MNDNR PWI, City of Rosemount Wetland Inventory, Empire Township Wetland Inventory (completed by Dakota Soil & Water Conservation District), Soil Survey of Dakota County, historical aerial photographs (1938 to present), and a 2007 wetland field assessment of the entire UMore Park property. The proposed mining operations will impact wetlands on the site.

As mining progresses, re-grading will direct stormwater runoff from the mined areas to the interior of the site. Eventually mining will likely progress below the water table forming mine pit lakes (created). The potential impacts of excavation below the water table will be investigated in the EIS. It is anticipated that the reclamation process will result in the creation of water bodies within the UMore Mining Area. These created water features may interact with groundwater and will be part of the surface water management system.

Proposed Treatment of Topic in EIS

The EIS will include an assessment and discussion of existing jurisdictional wetlands on the site, potential wetland impacts and proposed mitigation, impacts of mining below the water table, and impacts of surface water (e.g., lake) creation during the site utilization and reclamation process.

13. Water Use. Will the project involve installation or abandonment of any water wells, connection to or changes in any public water supply or appropriation of any ground or surface water (including dewatering)? ☒ Yes ☐ No

If yes, as applicable, give location and purpose of any new wells; public supply affected, changes to be made, and water quantities to be used; the source, duration, quantity and purpose of any appropriations; and unique well numbers and DNR appropriation permit numbers, if known. Identify any existing and new wells on the site map. If there are no wells known on site, explain methodology used to determine.

It is likely that a water supply well will be installed as part of the UMore Park Sand and Gravel Resources Project. The well will be used to supply water for gravel washing operations (to remove the fine particles from the mined aggregate) and for ancillary production and operation purposes (see response to EAW Question 6). Water from the well will be used to initially fill the site wash ponds. After the wash ponds have been filled, the new well will be used to supplement recycled wash water and site storm water to maintain pond water levels, as necessary.
The location of the well will depend on the location of the operational areas and will be selected to minimize impacts to surrounding water users. Pre-existing site wells have been located using the Dakota County Well and Water Management System (WELLMAN) and the Minnesota County Well Index.

The new well will be designed and constructed in accordance with Minnesota Rules Chapter 4725 to withdraw groundwater from the glacial outwash aquifer. Groundwater pumping rates are anticipated to vary from zero (during non-production hours) to approximately 200 gallons per minute (gpm).

No changes to the existing public water supply system will be made as a result of the project. There are several irrigation and private supply wells owned by the University of Minnesota that will be permanently sealed as part of the preparation for each mining phase and prior to the commencement of mining operations. These wells will be permanently sealed in accordance with Minnesota Department of Health rules and the Dakota County ordinance.

The University of Minnesota is conducting a Groundwater Assessment for the UMore Mining Area that will include the collection of existing groundwater data, construction of new monitoring wells, conducting aquifer tests, and the completion of a groundwater flow model.

**Proposed Treatment of Topic in EIS**

The EIS will include a description of the planned water supply well location and operations. The location of the well will be selected to avoid any areas determined to have potential for groundwater impact. A groundwater flow model will be used to demonstrate the likely pumping effects related to the water supply well. The EIS will also include a discussion of the location of existing wells that will be potentially affected by the new well or that will be sealed prior to mining.

14. **Water-related land use management districts.** Does any part of the project involve a shoreland zoning district, a delineated 100-year flood plain, or a state or federally designated wild or scenic river land use district? ☒ Yes ☐ No

If yes, identify the district and discuss project compatibility with district land use restrictions.

According to Flood Insurance Rate Map (Community Panel 270101 0150 B, April 1981), two small areas within the UMore Mining Area are located within a designated Zone A (100-year flood) district. These areas area located between 160th Street and 170th Street (Section 4, Township 114N, Range 19 West).

**Proposed Treatment of Topic in EIS**

The EIS will further investigate the floodplain districts within the UMore Mining Area and will evaluate the potential affect of the proposed operations on the floodplain.
15. **Water Surface Use.** Will the project change the number or type of watercraft on any water body?

- Yes
- No

If yes, indicate the current and projected watercraft usage and discuss any potential overcrowding or conflicts with other uses.

There are no existing water bodies that allow the use of watercraft within the UMore Mining area.

**Proposed Treatment of Topic in EIS**

The EIS will not discuss water surface use since the project is not anticipated to change the number and/or type of watercraft on any water body.

16. **Erosion and Sedimentation.** Give the acreage to be graded or excavated and the cubic yards of soil to be Moved: To be determined Acres; To be determined cubic yards. Describe any steep slopes or highly erodible soils and identify them on the site map. Describe any erosion and sedimentation control measures to be used during and after project construction.

The total volume and classification of soil/aggregate from the UMore Mining Area to be displaced will be estimated upon completion of the Mining Plan. The presence of existing steep slopes (>12%) within the UMore Mining Area is minor. However, as mining operation commence, the slopes of the mining pit walls are anticipated to exceed 12-percent. A National Pollutant Discharge Elimination Systems (NPDES) permit will be required for the mining operation. Erosion prevention and sediment control Best Management Practices (BMPs) specific to mining practices will be followed in accordance with the NPDES permit, which includes an erosion control plan.

A NPDES general permit #MN R100000 will be requested from the MPCA for the project. The permit includes requirements for a Storm Water Pollution Prevention Plan (SWPPP) to be developed. The SWPPP shall include both temporary and permanent erosion prevention and sediment control methods.

**Proposed Treatment of Topic in EIS**

The EIS will discuss erosion and sedimentation based on the data available at the time, which is anticipated to include further definition of the scope of the gravel mining operations.

17. **Water Quality – Surface Water Runoff.**

a. Compare the quantity and quality of site runoff before and after the project. Describe permanent controls to manage or treat runoff. Describe any storm water pollution prevention plans.

**Existing Condition**

The proposed UMore Mining Area is located in the Vermillion River watershed, approximately 3.7 miles upstream of the Vermillion River (a MNDNR designated trout stream). The primary land use of the study area is agricultural and open space. The impervious portions of the study area that can be classified as disconnected impervious areas are less than 1-percent of the total area and are comprised of few
roads, mostly gravel, and a few buildings on the east, center and south sides of the property. There are some sparse wooded areas which cover less than 3-percent of the entire study area. For the most part, the average slope of the study area is less than 1-percent except around the wetlands and depressions in the central and the western part of the study area as well as in the northeast corner which has a rolling topography.

Topography, land use, and soil type of the UMore Mining Area cause little or no runoff during most storm events, i.e. infiltration is high and the area is most likely a recharge zone for the regional groundwater system. Under more extreme storm events, after replenishing shallow depressions, runoff from half of the area flows towards the south and southeast and may contribute to the North Branch of the Vermillion River and Tributary No. 5 to the Vermillion River (the name assigned for that branch in hydrologic model studies of the Vermillion River) and eventually the Vermillion River. The central and northwestern parts of the UMore Mining Area are landlocked with a limited area draining to the west. The north and northeast areas drain to the east and do not contribute to the Vermillion River. Some small areas of the rolling topography in the northeast corner are landlocked and contain a number of wetlands.

Post-Mining Condition
For smaller rainfall events, runoff is minimal and no major change is expected. Under more intense rainfall events, the runoff rates and volumes could be changed by the proposed alterations in the drainage patterns within the UMore Mining Area. By reducing the contributing surface water drainage area, the peak runoff rates in the North Branch of the Vermillion River as well as Tributary No. 5 to the Vermillion River may be decreased. Mining in the landlocked areas in the central, western, and northwestern parts of the site will not impact the surface drainage patterns outside of the UMore Mining Area. Depending upon the mining plan, mining operations may result in the development of water features (pit lakes). These water features may interact with the regional groundwater aquifer. The approximate water table elevation occurs at the 875-foot contour.

Proposed Treatment of Topic in EIS
In order to address changes in surface runoff patterns as well as changes in water quality of the receiving waters and the resulting lakes/ponds, a watershed model will be developed during the EIS process to estimate peak runoff from less frequent events and a water budget model to estimate the long term change in the volume of water contributed to the receiving water bodies. The EIS will summarize the model findings and include mitigation options if impacts are anticipated.

b. Identify routes and receiving water bodies for runoff from the site; include major downstream water bodies as well as the immediate receiving waters. Estimate impact runoff on the quality of receiving waters.

The UMore Mining Area is dominated by relatively flat land with occasional, small, isolated depressions. In September 2008, wetlands were delineated on the site however, regulatory concurrence regarding these wetland delineations has not been
reached at this time. Based on site topography, permeable soils, and depth to regional groundwater, it appears that surface runoff is negligible and little runoff leaves the site.

An intermittent drainageway exists in the southeastern portion of the site, but it lacks wetland characteristics, contains upland grasses, and appears to drain into an isolated, on-site road ditch (i.e., it does not appear to leave the site or be contiguous with other surface waters). In the southwestern portion of the site, a poorly defined, broad swale slopes to the south and east where it crosses 170th Street. Both of these drainageways may carry runoff during severe storm events and spring snow melt. Ultimately, runoff in the southwestern swale flows through Tributary No. 5 and into the Vermillion River approximately 3.7 miles downstream from the site. The Vermillion River flows into the Mississippi River at Hastings, Minnesota, approximately 15 miles downstream.

This project is expected to have little to no impact on surface runoff from the site as agricultural activities will be replaced by mining. The creation of depressions, lakes and ponds will contain runoff within the UMore Mining Area. Surface temperature of water collecting within a lake or pond can potentially warm during the summer months. Depending upon the proposed mining plan, the resulting mine pit lakes/ponds may recharge the uppermost groundwater aquifers with warmer water, which may affect the temperature of base flow in the tributaries that are located downgradient from the mine pit lakes or ponds.

**Proposed Treatment of Topic in EIS**

Groundwater flow is currently believed to flow northeast from the proposed mine areas. If groundwater flow from the mine areas is toward the south or southeast it is possible that groundwater from the UMore Mining Area may provide a source of base flow to the Vermillion River and its tributaries. The Groundwater Assessment will investigate groundwater flow directions and future modeling will be used to analyze potential impacts to groundwater receptors. In addition to assessing the impact of surface water runoff rates and volume as discussed in 17a above, the EIS will address impacts of changes in surface water runoff quality on the Vermillion River, its tributaries, and created pit lakes (e.g., estimate the total phosphorus and total suspended solids loading to the pit lakes and off-site discharges using the post-mining land use and export coefficients).

18. **Water Quality – Wastewater.**

a. Describe sources, composition and quantities of all sanitary, municipal and industrial wastewater produced or treated at the site.

Sanitary (domestic) wastewater generated by employees and occupants of: offices, plants, process facilities, etc. will be treated by conventional Individual Sewage Treatment Systems (ISTS) that will be permitted by the City of Rosemount or Empire Township (depending upon location and jurisdiction), or will be collected in portable toilet facilities that will be provided, cleaned, and serviced by commercial companies licensed and permitted for such activities.
Sanitary sewer lines operated by Metropolitan Council Environmental Services (MCES) border the northern and western portions of the proposed mining site. It may be possible to utilize those lines for discharge of domestic wastewater for treatment in MCES wastewater plants. The issues of whether MCES would allow direct discharge to their lines, metering of flows and charges for handling and treatment of these flows would all have to be addressed with the MCES and coordinated with individual operators on the site.

Industrial wastewaters will result from the production of aggregates, recycling of materials returned to the site as described in question 6, and possibly from activities within plants producing concrete and asphalt mixtures. Aggregates produced will be treated by dry (screening, separating and stockpiling) and wet (washing) processing methods. The washing process will result in water carrying fine clay, silt and sand particles. This wash water will flow to settling ponds where the fine soil particles will settle out. The clarified water from these ponds will be pumped back to the washing plant for reuse. Some of the wash water and the water in the ponds will percolate into the ground and some will evaporate into the air. Recycling of materials will be predominately dry (screening, separating, crushing, and stockpiling) processing methods, but may include some, limited washing of recycled products. Wastewater generated during the production of concrete mixtures will include washout water from the plant and ready mix concrete delivery trucks, including concrete delivery trucks returning to the plant after discharging their loads, washing off water from the exterior of the delivery trucks, and water from general cleanup of the production plant. Small amounts of wastewater may be generated by cleanup of asphalt plant operations. These wastewaters will be collected in settling ponds. The clarified water from the ponds may be reused for washing off and out trucks and the plant; the fine soil particles in the wastewater will settle out to the pond bottoms.

**Proposed Treatment of Topic in EIS**

The EIS will include a discussion of on site ISTS and commercial, portable toilet facilities, as well as a more complete discussion of the layout, and operation of settling ponds for aggregate production and concrete and asphalt plant wastewater handling.

b. Describe waste treatment methods or pollution prevention efforts and give estimates of composition after treatment. Identify receiving waters, including major downstream water bodies, and estimate the discharge impact on the quality of receiving waters. If the project involves on-site sewage systems, discuss the suitability of site conditions for such systems.

All domestic wastewater will be treated on site by permitted ISTS or will be collected from licensed and permitted portable toilet facilities and handled and treated by the toilet facilities provider. Based on a review of soil conditions throughout the UMore Mining Area, suitable locations for ISTS operation are anticipated.

Industrial wastewaters associated with the mining operation will be treated on site by settling ponds with the majority of these wastewaters recycled for reuse in the proposed processing operations. No process water will be allowed to discharge from the proposed mining operation or plant areas to downstream receiving waters. In
addition to water, the settling ponds will generate some fine aggregates that will settle out in the pond bottoms. This fine aggregate lining could supplement or replace a manufactured liner in the ponds or lakes to ensure that these water bodies can maintain a consistent water level.

**Proposed Treatment of Topic in EIS**

The EIS will include a discussion of on site ISTS and commercial, portable toilet facilities, as well as a more complete discussion of the layout, and operation of settling ponds for aggregate production and concrete plant wastewater handling.

c. If wastes will be discharged into a publicly owned treatment facility, identify the facility, describe any pretreatment provisions and discuss the facility’s ability to handle the volume and composition of wastes, identifying any improvements necessary.

Not applicable as all wastes will be discharged to and treated by privately owned facilities as described above, ISTS and commercial, portable toilet facilities for domestic wastewater, and settling ponds for industrial wastewaters.

**Proposed Treatment of Topic in EIS**

Not applicable as all wastes will be discharged to and treated by privately owned facilities as described above.

d. If the project requires disposal of liquid animal manure, describe disposal technique and location and discuss capacity to handle the volume and composition of manure. Identify any improvements necessary. Describe any required setbacks for land disposal systems.

Not applicable, as no liquid animal manure will be generated by the proposed mining activity or possible, ancillary concrete or asphalt plant installations.

**Proposed Treatment of Topic in EIS**

The EIS will not include a discussion of animal waste disposal, as no animal wastes will be generated by the proposed operations.

19. **Geologic hazards and soil conditions.**

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<thead>
<tr>
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<th>Approximate depth (in feet) to</th>
<th>Ground water: 24 minimum; 60 Average. Bedrock: 90 minimum; 125 Average.</th>
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Describe any of the following geologic site hazards to ground water and also identify them on the site map: sinkholes, shallow limestone formations or karst conditions. Describe measures to avoid or minimize environmental problems due to any of these hazards.

The St. Peter Sandstone and the Prairie du Chien Group (dolomite) comprise the uppermost bedrock units and are covered by 90 to over 160 feet of unconsolidated sediments. Based on the Karst Features Database of Southeastern Minnesota
(Minnesota DNR, 2002), no mapped karst features are located within nine miles of the UMore Mining Area.⁵

**Proposed Treatment of Topic in EIS**

The EIS will include a discussion of the depth to and nature of the bedrock surface as determined from the available information and the results from the Groundwater Assessment that will be carried out for the EIS. A report describing the findings of the Groundwater Assessment will be included in the EIS.

b. Describe the soils on the site, giving SCS classifications, if known. Discuss soil granularity and potential for groundwater contamination from wastes or chemicals spread or spilled onto the soils. Discuss any mitigation measures to prevent such contamination.

Overall, the soils and sediments within the UMore Mining Area are anticipated to be reasonably permeable. Based on soil survey maps (USDA, 2008), Waukegan series soils cover approximately ninety percent of the UMore Mining Area. The Waukegan series consists of deep, well drained soils that form on outwash plains and stream terraces and are described as moderately to rapidly permeable. Beneath the surface soils, unconsolidated glacial sediments are present including outwash, till and lacustrine deposits. The outwash is comprised of sand and gravel sized aggregate and is the primary geologic deposit targeted for the proposed mining activities. The till and lacustrine deposits consist of finer grained sediments (silt and clay) and are anticipated to be present discontinuously within the outwash throughout the UMore Mining Area.

The potential for groundwater impact from the proposed gravel mining activities is likely to be low. Existing soil impacts will have been removed prior to mining operations. During mining operations, state and federally mandated measures will be implemented to prevent chemical releases. These measures include the development of Storm Water Pollution Prevention (SWPP) and Spill Prevention, Containment and Control (SPCC) Plans. These plans are required to include best management practices to minimize the potential of chemical releases (e.g., fuel tank secondary containment systems) or erosion impacts during construction and operations.

A hypothetical spill at the UMore Mining Area may infiltrate vertically to the groundwater table and then move laterally in the uppermost groundwater through the outwash deposit. Groundwater flow would likely result in northeasterly direction of migration, under property owned by the University. The presence of finer grained sediments below the water table would likely retard the downward and lateral migration of any such release reducing the impact on potential receptors.

**Proposed Treatment of Topic in EIS**

The EIS will include, as part of the Groundwater Assessment, an evaluation of the geology at the UMore Mining Area and the development of a groundwater flow model that will be used to predict groundwater flow and potential thermal transport.

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A report describing the findings of the groundwater assessment will be included in the EIS.

20. **Solid Wastes, Hazardous Wastes, Storage Tanks.**

   a. Describe types, amounts and compositions of solid or hazardous wastes, including solid animal manure, sludge and ash, produced during construction and operation. Identify method and location of disposal. For projects generating municipal solid waste, indicate if there is a source separation plan; describe how the project will be modified for recycling. If hazardous waste is generated, indicate if there is a hazardous waste minimization plan and routine hazardous waste reduction assessments.

   Debris from clearing land prior to mining will be burned or disposed of in compliance with local, state and federal regulations.

   Fine particles collected through washing processes will be stockpiled and eventually blended with excess sand and used in reclamation activities. The productions of ready-mixed concrete and concrete products have similar waste streams. Both processes generate waste concrete. Ready-mix producers will have rejected loads and excess concrete, while block producers will have broken and/or rejected blocks. Both processes produce a clean-up / wash out type of cementitious slurry. This slurry is added to the waste concrete and both of these waste streams are typically crushed and recycled as road base. The block operations also generate waste pallets. These wooden pallets are typically chipped, recycled, or burned. The production of asphalt will also generate waste with excess asphalt, which can be blended back into the product or blended and crushed with concrete for road base.

   During routine aggregate mining and processing and in the production of the associated construction materials, several hazardous waste streams will be created to support the vehicles, equipment, and supplies used in the operation. Specific rules, regulated by the MPCA and licensed by Dakota County Ordinances, govern the handling, transport, and disposal of hazardous materials. Items such as vehicle and equipment fluids (i.e. used motor oil, filters, antifreeze, hydraulic fluid, etc.) and office supplies (i.e. fluorescent light bulbs, cleaning supplies, electronic equipment, etc) will be used at the site.

   **Proposed Treatment of Topic in EIS**

   The EIS will further discuss the anticipated solid wastes and hazardous waste materials produced at the UMore Mining Area and will identify the disposal plan for these materials. A hazardous waste reduction and minimization plan will be discussed as part of the mitigation commitments.

   b. Identify any toxic or hazardous materials to be used or present at the site and identify measures to be used to prevent them from contaminating groundwater. If the use of toxic or hazardous materials will lead to a regulated waste, discharge or emission, discuss any alternatives considered to minimize or eliminate the waste, discharge or emission.

   Potentially toxic or hazardous materials to be used or present at the UMore Mining Area include gasoline, diesel fuel, and an array of vehicle/equipment operation and maintenance fluids. To avoid the risk of impacting groundwater, all toxic or
hazardous materials will be properly stored and utilized in accordance with local, state, and federal rules and regulations.

**Proposed Treatment of Topic in EIS**

See response to Question 20a.

c. Indicate the number, location, size and use of any above or below ground tanks to store petroleum products or other materials, except water. Describe any emergency response containment plans.

No underground storage tanks are expected within the UMore Mining Area. As noted above, it is anticipated that each operator and/or production facility working within the UMore Mining Area will have AST's for various uses. Each tank will be located, identified, and contained according to the MPCA, Occupational and Safety Administration (OSHA) and Mining Safety and Health Administration (MSHA). Each operator is responsible to submit an Emergency Management and Spill Prevention Plans with the MPCA.

**Proposed Treatment of Topic in EIS**

See response to Question 20a.

<table>
<thead>
<tr>
<th>21. Traffic. Parking spaces added:</th>
<th>To be determined</th>
<th>Existing spaces (if project involves expansion):</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated average daily traffic generated:</td>
<td>To be determined</td>
<td>Estimated maximum peak hour traffic:</td>
<td></td>
</tr>
<tr>
<td>Generated (if known) and its timing:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide an estimate of the impact on traffic congestion affected roads and describe any traffic improvements necessary. If the project is within the Twin Cities metropolitan area, discuss its impact on the regional transportation system.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The UMore Park Sand and Gravel Resource Project will generate traffic as a result of operating an active mine(s). Traffic will be generated by employees; gravel trucks, and miscellaneous supply trucks. A traffic study is being completed that will further analyze the impact of the proposed project on the local and regional transportation network. To date, peak hour turning movements have been collected at key intersections surrounding the study area. This data will be utilized in determining potential safety and operational affects of the proposed action.

**Proposed Treatment of Topic in EIS**

The EIS will include a discussion of the detailed traffic analysis and results of the traffic study. Intersection and roadway operations and safety conditions will be addressed in the Draft EIS.
22. **Vehicle-related Air Emissions.** Estimate the effect of the project’s traffic generation on air quality, including carbon monoxide levels. Discuss the effect of traffic improvements or other mitigation measures on air quality impacts. Note: If the project involves 500 or more parking spaces, consult *EAW Guidelines* about whether a detailed air quality analysis is needed.

The Minnesota Department of Transportation (Mn/DOT) and the Metropolitan Council have outlined procedures for requiring detailed “hot spot” air quality evaluations. According to the Highway Project Development Process Handbook (HPDP), a hot spot evaluation is required if a proposed project will increase traffic volumes to a level greater than one of the intersections listed on the Top Ten Intersection List included in Part II, Section D, Appendix 5 of the HPDP. The lowest traffic volume on the Top Ten Intersection List is 35,800 ADT. A hot spot evaluation will be prepared if projected traffic volumes exceed 35,800 ADT at the peak intersection.

**Proposed Treatment of Topic in EIS**

The EIS will not include a discussion of vehicle-related air emissions unless project traffic volumes are found to exceed 35,800 ADT at the peak intersection upon completion of the traffic study.

23. **Stationary Source Air Emissions.** Describe the type, sources, quantities and compositions of any emissions from stationary sources of air emissions such as boilers, exhaust stacks or fugitive dust sources. Include any hazardous air pollutants (consult *EAW Guidelines* for a listing), any greenhouse gases (such as carbon dioxide, methane, and nitrous oxides), and ozone-depleting chemicals (chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons or sulfur hexafluoride). Also describe any proposed pollution prevention techniques and proposed air pollution control devices. Describe the impacts on air quality.

Emissions of regulated pollutants will be generated from material handling, storage and processing activities proposed as part of this project. In addition, emissions will be generated from the combustion of fuels in equipment such as dryers or generators.

Emissions from the site will be subject to the air quality regulations in Minnesota Rules administered by the Minnesota Pollution Control Agency (MPCA). These regulations specify permitting requirements and emission limits for regulated processes. In addition, federal New Source Performance Standards (NSPS), codified in 40 CFR 60 may be applicable to the project. NSPS have been developed for Nonmetallic Mineral Processing Plants (40 CFR 60 Suppart OOO), Calciners and Dryers in Mineral Industries (Subpart UUU), and diesel engines (Subpart IIII).

To receive an air permit to construct and operate the facility, the applicant must demonstrate that the regulated equipment and activities will comply with applicable regulations at all times. Air dispersion modeling is used to calculate off-property concentrations of pollutants to verify that potential emissions do not cause an exceedance of state or federal ambient air quality standards.

**Proposed Treatment of Topic in EIS**

The EIS will include a description of the equipment and processes that may generate regulated air pollutants. Potential emission rates will be estimated for stationary sources and fugitive dust sources associated with the project. Emissions will be calculated for
criteria pollutants, greenhouse gasses, and federal hazardous air pollutants. In the EIS, air quality regulations and permitting programs will be identified that may apply to the project.

A summary of the emission limits, pollution control equipment, dust suppression systems, and compliance practices associated with those regulations and programs will be included in the EIS. A comparison of air dispersion modeling results and ambient air quality standards will be presented in the EIS.

24. **Odors, noise and dust.** Will the project generate odors, noise or dust during construction or during operation? ☑ Yes ☐ No

If yes, describe sources, characteristics, duration, quantities or intensity and any proposed measures to mitigate adverse impacts. Also identify locations of nearby sensitive receptors and estimate impacts on them. Discuss potential impacts on human health or quality of life. (Note: fugitive dust generated by operations may be discussed at item 23 instead of here.)

**Dust**

Fugitive dust is expected during operation of the site. Aggregate mining generates dust during topsoil and overburden removal process, during extraction, as a result of transporting the material to the processing plant and during crushing and screening operations. Truck delivery and transport of the finished products also generates dust on haul roads. In addition, dust can be generated during recycling and the production of the ready-mixed concrete, concrete block products and asphalt. The distances between mining operations (including internal haul roads), and nearby receptors will vary as mining operations move within the UMore Gravel Mining Area. Mining operations, processing/ancillary manufacturing operations will be strategically placed throughout the site to maximize efficiencies. However, whenever possible, operations will be located as far from sensitive receptors and will be oriented to minimize impacts whenever possible.

Emissions of fugitive dust are regulated by the MPCA under state and federal air quality programs (see response to Item 23 above).

**Odors**

The proposed operations may likely include asphalt processing facilities. These types of operations will be sited to the extent practical to minimize potential effects on sensitive receptors. Exhausts of diesel equipment and vehicles are another potential odor source, however, it is anticipated that any potentially substantial concentrations would likely disperse prior to reaching the property line of the operations.

**Noise**

Noise will be generated from the site as a result of construction equipment extracting aggregate resources and trucks hauling resources from the site. Furthermore, processing and ancillary manufacturing operations will generate various levels of noise on the site.

**Proposed Treatment of Topic in EIS**

The EIS will include fugitive dust emission calculations associated with the project and a description of equipment and activities proposed to mitigate the generation of dust.
Fugitive dust emissions will be included in the air dispersion modeling described in Item 23. The noise analysis will address potential impacts associated with the operations of on-site processing equipment and trucks hauling the resources from the site via the surrounding roadway system. Odors will not be further addressed in the EIS.

25. Nearby resources. Are any of the following resources on or in proximity to the site?
   a. Archaeological, historical, or architectural resources? ☒ Yes ☐ No
   b. Prime or unique farmlands or land within an agricultural preserve? ☒ Yes ☐ No
   c. Designated parks, recreation areas, or trails? ☒ Yes ☐ No
   d. Scenic views and vistas? ☐ Yes ☒ No
   e. Other unique resources? ☐ Yes ☒ No

   If yes, describe the resource and identify any project-related impacts on the resources. Describe any measures to minimize or avoid adverse impacts.

   a. Archaeological, Historical, or Architectural Resources - A preliminary cultural resources investigation is in the process of being conducted by The 106 Group Ltd. for the proposed project. Since there is currently no federal involvement (e.g., federal permitting and/or funding), the investigation needs to comply solely with applicable state mandates governing cultural resources, such as the Minnesota Historic Sites Act, the Minnesota Field Archaeology Act, and the Minnesota Private Cemeteries Act.

   To comply with the applicable mandates, the cultural resources investigation will determine if any archaeological resources that are listed or potentially eligible for listing on the National Register of Historic Places (NRHP) are located within or near the project area and may be affected by the proposed undertaking.

   Desktop analysis has been completed and a systematic Phase IA archaeological (pedestrian) survey is currently underway. The pedestrian survey will further assess archaeological sites potential and identify areas of previous disturbance. If the results of the survey indicate that additional testing is required, this will take place no earlier than the spring of 2009.

   The background research and desktop analysis have indicated that the area has a low potential for containing precontact (Native American) archaeological sites, due to the general lack of topography and perennial water sources in the project area. There is, however, potential for the project area to contain post-contact (Euro-American) archaeological sites near the mapped locations of houses that appear on early plat maps of Dakota County.

   b. Prime or Unique Farmlands or Land Within an Agricultural Preserve - A review of the Natural Resource Conservation Service (NRCS) Soil Survey concluded that several locations within the study area contain soils that are classified by the NRCS as prime and/or statewide important farmlands. Question 19 of this Scoping EAW provides additional information regarding soil conditions within the project study area.
c. **Designated Parks, Recreation Areas, or Trails** - Vermilion Highlands, a Research, Recreational, and Wildlife Management Area, is located to the southeast of the UMore Mining Area. No impacts to this management area are anticipated.

d. **Scenic Views and Vistas** – none have been identified within the UMore Gravel Mining Study Area.

e. **Other Unique Resources** – none have been identified within the UMore Gravel Mining Study Area.

**Proposed Treatment of Topic in EIS**

The findings from the Phase IA archaeological (pedestrian) survey will be documented in the Draft EIS along with a summary of any consultation with the State Archeologist and SHPO.

An assessment of prime and/or statewide important farmlands will be conducted.

26. **Visual impacts.** Will the project create adverse visual impacts during construction or operation? Such as glare from intense lights, lights visible in wilderness areas and large visible plumes from cooling towers or exhaust stacks? ☒ Yes ☐ No

If yes, explain.

The proposed UMore Mining Area will present visual impacts during construction and operation. Visual impacts will occur in various forms ranging from changing land cover type, earth moving equipment, truck traffic, lighting, stockpiling of aggregate resources, emission plumes, and dust. Mining operations will be conducted in a similar manner that is consistent with current mining practices found in the immediate area. The level of impacts will vary in degree among adjacent land uses, surrounding topography and the viewer's line of sight.

Long-term visual impacts are anticipated to occur during the life of the mining operations. At that time, the end use may return to agricultural, resulting in little or no visual impact from the proposed mining site.

**Proposed Treatment of Topic in EIS**

The EIS will evaluate and summarize the extent of visual impacts associated with adjacent land uses and lines of sight. Mitigation measures will address site design and landscaping measures to reduce visual impacts over the course of the mine's lifespan.

27. **Compatibility with plans and land use regulations.** Is the project subject to an adopted local comprehensive plan, land use plan or regulation, or other applicable land use, water, or resource management plan of a local, regional, state or federal agency? ☒ Yes ☐ No

If yes, describe the plan, discuss its compatibility with the project and explain how any conflicts will be resolved. If no, explain.
2030 Comprehensive Plan Updates

The Metropolitan Land Planning Act (MLPA) requires that local governments within the seven-county metropolitan area review and update their Comprehensive Plans at least every ten years. The last Comprehensive Plan update for the City of Rosemount was completed in 2000 and Empire Township’s plan was completed in 1999. Under the MLPA the next round of updates are due at the end of 2008.

By State Statute, plans are required to have specific components as guided by the MLPA. Review of these components are conducted by the Metropolitan Council in order to assess compatibility with metropolitan system plans, consistency with other adopted plans of the Metropolitan Council and compatibility with Comprehensive Plans of adjacent communities and affected jurisdictions. Both the City of Rosemount and Empire Township are in the process of finalizing and adopting their Comprehensive Plan Updates.

The EIS will assume that the 2030 Comprehensive Plan Updates by the City of Rosemount and Empire Township will be consistent with the Metropolitan Council’s 2030 Regional Development Framework and regional policy plans that address regional systems.

City of Rosemount’s 2030 Comprehensive Plan Update

The City’s 2030 Comprehensive Plan Update currently identifies the UMore Mining Area for “Agricultural Research (AGR)”. The AGR land use designation applies to the entire UMore Park property. In that respect, the Plan text acknowledges the planning efforts being put forth for the UMore Park property and recognizes that the property will eventually urbanize over time.

The City of Rosemount anticipates a major Comprehensive Plan amendment to occur as part of the UMore Park planning efforts. In the meantime, the site of the UMore Mining Area will maintain an “Agricultural Research” designation. The interim use of gravel mining is supported by the Comprehensive Plan. The Land Use Element Goals and Policies ensure that interim uses allow for productive use of land before development occurs, but does not prevent or inhibit the orderly development of land. Gravel mining operations shall be required to have an approved reclamation plan that allows development to occur in a manner consistent with applicable elements of the Comprehensive Plan. The reclamation plan for mining is part of the Mineral Extraction Permit process administered through the City of Rosemount Community Development Department.

Empire Township’s 2030 Comprehensive Plan Update

The Township’s 2030 Comprehensive Plan Update designates this area as “University of Minnesota (UMore)” and to be part of the “Mining Overlay Area”. The mining overlay zoning district has been in place since the adoption of the 1997 Comprehensive Plan. The purpose of the Mining Overlay has been defined as an area to identify concentrated locations of high quality aggregate resources and where mineral extractions may occur. The Land Use Plan has designated 6,000 acres of land to be included in the overlay district. The plan update incorporates the UMore Mining Area into the Comprehensive Plan’s Mining Overlay Area.
The 2030 Comprehensive Plan Update recognizes the importance of aggregate resource protection. Areas with substantial aggregate resources have been zoned under the “Agricultural Zoning District (AG).”

**Dakota County 2030 Comprehensive Plan Update**

The County's 2030 Comprehensive Plan Update is not available at this time. Therefore, compatibility assessment is based on the current plan.

The County's 2020 Comprehensive Plan was published in 1999. The Plan is composed of several chapters ranging from Housing, Land Use, Transportation and Environmental and Natural Resources. The two chapters that are found to be relevant to the proposed UMore Mining Project Area are the Environmental and Natural Resource Management Policy Plan and the Transportation Policy Plan.

The Environmental and Natural Resource Management Policy Plan supports mining operations and recognizes the importance of local aggregate resources. The UMore Mining Area is compatible with the policy plan.

The Transportation Policy Plan will need to be evaluated in further detail as part of the EIS research and analysis. Traffic impacts addressed under Question #21 will be coordinated with Dakota County to ensure compatibility with the County’s Transportation Plan.

**Zoning Regulations/City Code**

Land uses that support the educational, research and outreach missions of the University of Minnesota on land owned by it are exempt from local land use regulations. Aggregate mining of the existing regional resource within the UMore Mining Area is consistent with both regional policies and the University's mission.

**City of Rosemount**

Under current zoning regulations the UMore Mining Area is zoned for “Agriculture (AG)”. Gravel mining operations are generally permitted through the issuance of a Mineral Extraction Permit under this zoning classification. Rosemount City Code (11-10-4) states that “mineral extraction shall not be allowed in that portion of Rosemount located west of Akron Avenue, so as not to interfere with the orderly growth and expansion of public utilities”. Within the UMore Mining Area, areas west of Akron Avenue, south of County Road 42 mandates an amendment of this provision of the City Code.

**Empire Township**

Under the current zoning regulations, the UMore Mining Area is zoned for “Agricultural Preservation District (AG)”. However, the Agricultural Preservation District does not permit the use of mining operations. The “Mineral Extraction District (ME)” is the appropriate zoning district to allow for mining operations. The Township's 2030 Land Use Plan has guided the UMore Mining Area to be included in the Mineral Extraction District. The Township is required under State Statue (Stat. 473.865, Subd. 3) to achieve consistency between it’s zoning districts and the Comprehensive Plan. Pursuant to that statute, once the 2030 Comprehensive Plan Update has been approved and adopted by the Town Board, Empire Township has nine months to make this zoning change under the statute.
Proposed Treatment of Topic in EIS

The EIS will assume that all 2030 Comprehensive Plan Updates will be consistent with the Metropolitan Council’s 2030 Development Framework Plan and Regional Policies. The EIS recognizes the updates are being competed in conjunction with this Scoping EAW. The analysis in the EIS will use the most current version of the comprehensive plan updates to address any questions within the document.

With respect to Empire Township and the City of Rosemount, the proposed mining site will be compatible with zoning regulations, assuming the anticipated zoning amendments will follow after the adoption of the two jurisdiction’s 2030 Comprehensive Plan Updates. The University will pursue all necessary approvals, permits, and zoning modifications.

The EIS will summarize the appropriate land use plan designations and zoning districts for each jurisdiction in respect to their comprehensive plan and zoning regulations.

28. Impact on infrastructure and public services. Will new or expanded utilities, roads, other infrastructure or public services be required to serve the project? ☑ Yes ☐ No

If yes, describe the new or additional infrastructure or services needed. (Note: any infrastructure that is a connected action with respect to the project must be assessed in the EAW; see EAW Guidelines for details.)

The proposed mining operation will have an impact on the existing transportation system in the project area. The majority of the existing roadways in the proposed project area are two lane, rural type facilities with some turn lanes. Dakota County Road 42 located along the northern boundary of the UMore Mining Area is a rural four-lane divided roadway with a depressed, grass median.

The driving lanes of the existing roadways within and surrounding the UMore Mining Area are either bituminous pavement or aggregate (gravel) surfacing. A traffic analysis is being performed to identify the need for relocation/reconstruction of any existing roadways, intersections, or construction of new roadways.

The proposed mining operation should have minimal or no impact on public services such as: police, fire, schools, hospitals, water distribution, sanitary sewer, or storm water management facilities.

Utilities

A Mid America pipeline is located to the north of the proposed mining operation. There should be no impact to this pipeline as a result of the proposed project.

The MCES Sanitary sewer line that runs adjacent to the UMore Mining Area along Biscayne Avenue and County Road 42. The sewer line is located within the right-of-way for Biscayne Avenue and is not likely to require realignment. No impacts to this interceptor line or associated easements are anticipated.

Private wells to provide the proposed mining operation with water for processing materials from the mining and for plant operations will be required as discussed in Question 13. Electrical power for operations of a wells in addition to power for processing and plant
machinery will be supplied by on-site power generation equipment or by extension of existing electrical power lines to the site. There is an electrical power distribution line located in the right-of-way of Dakota County Road 46. This power line will need to be relocated if the mining operation requires the realignment of County Road 46.

**Proposed Treatment of Topic in EIS**

A detailed traffic analysis is being completed and the finding of the analysis will be incorporated into the EIS. The EIS will contain a complete description of proposed roadway improvements and additions needed to accommodate and/or mitigate traffic from the proposed UMore Gravel Mining Project. Additionally, the EIS will examine the issue of on-site power generation versus extension of existing electrical power lines to serve the proposed mining operations.

29. **Cumulative impacts.** Minn. R. 4410.1700, subp. 7, item B requires that the RGU consider the “cumulative potential effects of related or anticipated future projects” when determining the need for an environmental impact statement. Identify any past, present or reasonably foreseeable future projects that may interact with the project described in this EAW in such a way as to cause cumulative impacts. Describe the nature of the cumulative impacts and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to cumulative impacts (or discuss each cumulative impact under appropriate item(s) elsewhere on this form).

It is anticipated the potential for cumulative impacts will focus on whether the proposed project operations may affect the expansion of suburban land development along primarily the north and west sides of the project site. In addition, the traffic analysis, surface water, and groundwater assessments will address the combined effects of the project with any past, present, or reasonably foreseeable future projects within the environmentally relevant area.

Public input is expected to play a role as well in the identification and analysis of potential cumulative impacts.

**Proposed Treatment of Topic in EIS**

Potential cumulative impacts will be addressed and analyzed in the EIS.

30. **Other Potential Environmental Impacts.** If the project may cause any adverse environmental impacts not addressed by items 1 to 28, identify and discuss them here, along with any proposed mitigation.

The EIS will discuss the importance of aggregate resources that are located within the seven-county metropolitan area. Previous studies, such as the “Aggregate Resource Inventory of the Seven-County Metropolitan Area, Minnesota” prepared by the Metropolitan Council and the University of Minnesota in 2002, establish that regional aggregate resources are diminishing rapidly while long-term demand from urbanization must be met as cost effectively as possible consistent with adequate environmental protection.

This demand for aggregate resources can pose social, economic and business impacts. The EIS intends to address these issues as they relate to the proposed UMore Mining Area from a local and regional context. It is also important to note that impacts may be positive
or negative. In order to determine the level of impacts, the EIS will address in general terms the following items:

- **Resource Utilization and Economic Impacts**
  - Benefits of local aggregate resources
  - Effect on costs for private construction projects, public streets and infrastructure

- **Social/Community Impacts**
  - Influence on adjacent land values
  - End use amenities, such as parks and open space around the created water features of the site

- **Business Impacts**
  - The creation of new or expansion of existing businesses that support or are dependent on mining operations
  - The creation of new jobs

**Proposed Treatment of Topic in EIS**

The EIS will evaluate and assess the level of impact of each item listed above. A summary of the findings will be provided along with any proposed mitigation plans.

31. **Summary of issues.** Do not complete this section if the EAW is being done for EIS scoping; instead, address relevant issues in the draft Scoping Decision document, which must accompany the EAW. List any impacts and issues identified above that may require further investigation before the project is begun. Discuss any alternatives or mitigative measures that have been or may be considered for these impacts and issues, including those that have been or may be ordered as permit conditions.

Not applicable for Scoping EAW
RGU CERTIFICATION

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.

- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minn. R. 4410.0200, subps. 9b and 60, respectively.

- Copies of this EAW are being sent to the entire EQB distribution list.

Name and Title of Signer:  
Kathleen O'Brien, Vice President
University Services, University of Minnesota

Date:  
1/6/09

Environmental Assessment Worksheet was prepared by the staff of the Environmental Quality Board at Minnesota Planning. For additional information, worksheets or for EAW Guidelines, contact:
Environmental Quality Board, 658 Cedar St., St. Paul, MN 55155, 651-296-8253, or
www.mmplan.state.mn.us.
The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.
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UMore Park Sand and Gravel Resources
Scoping Environmental Assessment Worksheet

Figure 3
Proposed UMore Mining Area
The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

Figure 4
Potential Sites of Concern

University of Minnesota
UMore Park Sand and Gravel Resources
Scoping Environmental Assessment Worksheet

Source: HRGI, LMIC, MnDOT, Dakota County, Bairro, SEH

Pipelines (LMIC)
- Gas
- Liquid
- Site of Concern (SOC)
- UMore Mining Area (UMA)
- UMore Park Boundary

2,000 Feet
0 0 2,000