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# **Le Sueur County, MN**

**Thursday, November 12, 2015**

**Regular session**

## **Item 1**

### **Traxler Staff Report**

**Staff Contact: Kathy Brockway or Michelle Mettler**

# STAFF REPORT

## GENERAL INFORMATION

**APPLICANT:** TRAXLER CONSTRUCTION, PAT TRAXLER, LE CENTER, MN

**OWNER:** BETTY ANN MOLLENHAUER C/O RALPH & EVA FIX, EDINA, MN

**PROJECT DESCRIPTION:** To allow mineral extraction of 50 acres of a 76.63 acre parcel in an Agriculture "A" District, in the Mineral Resources "MR" Overlay District and the Airport Zoning "AZ" Overlay District. Property is located in the S half of the SE1/4 and the E half of the SE1/4, Section 11, Ottawa Township.

**MANDATORY ENVIRONMENTAL ASSESSMENT WORKSHEET (EAW) REQUIRED  
THEREFORE THE APPLICATION SHALL BE TABLED UNTIL SUCH TIME THE EAW IS COMPLETE**

**PURPOSE:** It is declared to be the policy of Le Sueur County to provide for the reclamation of land disturbed by mining in order to encourage productive use to include, but not limited to, the planting of forests; the seeding of grasses and legumes for grazing purposes; the planting of crops for harvest; the enhancement of wildlife and aquatic resources; the establishment of recreational residential and industrial sites; and for the conservation, development, management and appropriate use of all the natural resources of such areas for compatible multiple purposes; to aid in maintaining or improving the tax base; and protecting the public health, safety and general welfare of the people, as well as the natural beauty and aesthetic values, in the affected areas of the County.

**ZONING ORDINANCE SECTIONS:** Sections 8 and 20

### DEFINITIONS:

**EXTRACTION PIT** - Any artificial excavation of the earth exceeding fifty (50) square feet of surface area or two (2) feet in depth, excavated or made by the removal from the natural surface of the earth, of sod, soil, sand, gravel, stone or other natural matter; or made by turning, or breaking or undermining the surface of the earth. Excavations ancillary to other construction of any installation erected or to be erected, built, or placed thereon in conjunction with or immediately following such excavation shall be exempted, if a permit has been issued for such construction for installation.

**EXTRACTIVE USE** - The use of land for surface or subsurface removal of sand, gravel, rock, industrial minerals, other nonmetallic minerals, and peat not regulated under Minnesota statutes, sections 93.44 to 93.51 and as amended from time to time.

### GOALS AND POLICIES: 2007 COMPREHENSIVE LAND USE PLAN:

**GOAL #6:** *Aggregate resources are a finite resource that is directly impacted by scattered stie development.*

**Policy:** *The County should protect its aggregate resources from premature development.*

## SITE INFORMATION

**LOCATION:** 76.63 acre parcel located in Section 11, Ottawa Township

**ZONING:** Agriculture "A", Mineral Resources and Airport Zoning (Zone C) Overlay Districts

**GENERAL SITE DESCRIPTION:** Agricultural

**ACCESS:** State Highway Department

### EXISTING LAND USE WITHIN ¼ MILE:

**North:** Ag land **South:** Ag land

**West:** Ag Land, Mining Operations **East:** City of Le Sueur (BioEnergy Facility) and Mining Operations

## BACKGROUND INFORMATION

See enclosed narrative.

## TOWNSHIP BOARD NOTIFICATION

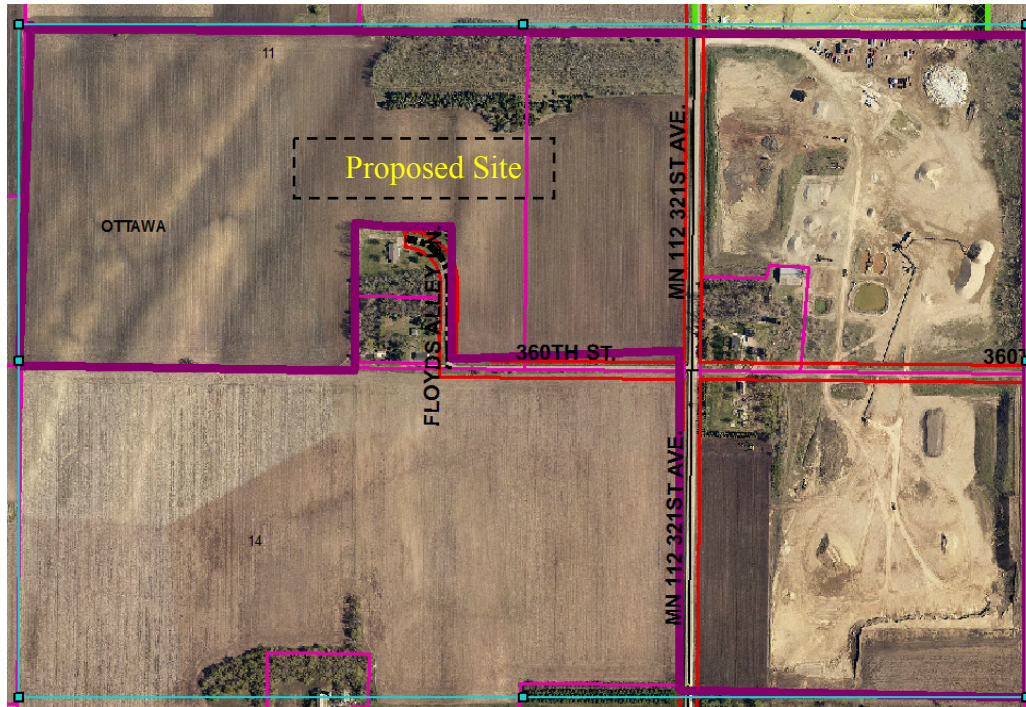
The applicants contacted Tim Griep, Ottawa Township Board member on May 8, 2015.

## NATURAL RESOURCES INFORMATION

**SHORELAND:** The proposal is not located within the Shoreland District.

**WETLANDS:** According to the National Wetlands Inventory, No wetlands located in the quarter-quarter section where the project is proposed.

## SITE PLAN



## LAND USE APPLICATION PERFORMANCE STANDARDS (to be discussed during the Conditional Use Permit process)

## ATTACHMENTS

Application, Environmental Assessment Worksheet (EAW)

## PLANNING AND ZONING COMMISSION CONSIDERATIONS

The Planning Commission and staff shall consider possible adverse effects of the proposed conditional use and what additional requirements may be necessary to reduce such adverse effects. Its judgment shall be based upon the following factors to include, but not limited to:

1. Relationship to County plans.
2. The geographical area involved.
3. Whether such use will negatively affect surrounding properties in the area in which it is proposed.
4. The character of the surrounding area.
5. The demonstrated need for such use.
6. Whether the proposed use would cause odors, dust, flies, vermin, smoke, gas, noise, or vibration or would impose hazards to life or property in the neighborhood.
7. Whether such use would inherently lead to or encourage disturbing influences in the neighborhood.
8. Whether stored equipment or materials would be screened and whether there would be continuous operation within the visible range of surrounding residences.
9. Abatement of Environmental Hazards as regulated in this Ordinance
10. Other factors impacting the public health, safety and welfare.

## PLANNING AND ZONING COMMISSION FINDINGS

Based on the information submitted by the applicant, contained in this report, and as required by the Le Sueur County Zoning Ordinance, the following findings have been developed for this request:

(Please circle one for each item: *Agree*, *Disagree*, Not *Applicable*.)

1. The conditional use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminishes and impairs property values within the immediate vicinity. A   **D**   NA
2. The establishment of the conditional use will not impede the normal and orderly development and improvement of surrounding vacant property for uses predominant in the area. A   **D**   NA
3. The adequate utilities, access roads, drainage and other facilities have been or are being provided. A   **D**   NA
4. The adequate measures have been or will be taken to provide sufficient off-street parking and loading space to serve the proposed use. A   **D**   NA
5. The adequate measures have been or will be taken to prevent and control offensive odor, fumes, dust, noise and vibration, so that none of these will constitute a nuisance, and to control lighted signs and other lights in such a manner that no disturbance to neighboring properties will result. A   **D**   NA

*Recommend (circle one) approval / denial / table / of Conditional Use Permit.*



# For County Approval

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## ENVIRONMENTAL ASSESSMENT WORKSHEET

# Gravel Mine Expansion Traxler Construction, Inc.

**M13.109352**

### Submitted by:

Bolton & Menk, Inc.  
1960 Premier Drive  
Mankato, MN 56001  
P: 507-625-4171  
F: 507-625-4177

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# Table of Contents

1.	Project Title: .....	1
2.	Proposer: .....	1
3.	RGU: .....	1
4.	Reason for EAW Preparation: .....	1
5.	Project Location: .....	1
6.	Project Description.....	3
7.	Cover Types:.....	6
8.	Permits and Approvals Required: .....	6
9.	Land Use:.....	7
10.	Geology, Soils and Topography/Land Forms: .....	8
11.	Water Resources: .....	10
12.	Contamination/Hazardous Materials/Wastes: .....	15
13.	Fish, Wildlife, Plant Communities, And Sensitive Ecological Resources: .....	17
14.	Historic Properties: .....	17
15.	Visual:.....	18
16.	Air: .....	18
17.	Noise .....	19
18.	Transportation .....	21
19.	Cumulative Potential Effects:.....	22
20.	Other Potential Environmental Effects: .....	24

# ENVIRONMENTAL ASSESSMENT WORKSHEET

This Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Environmental Quality Board's website at:

<http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm>. The EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form.

**Cumulative potential effects** can either be addressed under each applicable EAW Item, or can be addresses collectively under EAW Item 19.

**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: Traxler Construction, Inc. Gravel Mine Expansion

## 2. Proposer:

Contact Person: Patrick Traxler  
 Title: Owner  
 Address: 625 Commerce Drive  
 City, State, ZIP: Le Center, MN 56057  
 Phone: 507-357-2235  
 Fax: 507-357-6626  
 Email: [traxinc@frontiernet.net](mailto:traxinc@frontiernet.net)

## 3. RGU:

Contact Person: Kathy Brockway  
 Title: Planning & Zoning Admin.  
 Address: 88 South Park Avenue  
 City, State, ZIP: Le Center, MN 56057-1652  
 Phone: 507-357-8209  
 Fax: 507-357-8541  
 Email: [kbrockway@co.le-sueur.mn.us](mailto:kbrockway@co.le-sueur.mn.us)

## 4. Reason for EAW Preparation: (Check One)

### Required:

- ☐ EIS Scoping  
☒ Mandatory EAW

### Discretionary:

- ☐ Citizen petition  
☐ RGU discretion  
☐ Proposer initiated

4410.4300, subp. 12B, Nonmetallic mineral mining (mandatory EAW).

## 5. Project Location:

County	Le Sueur
City/Township	Ottawa
PLS Location (1/4, 1/4, Section, Township, Range):	South half of southeast quarter of Section 11 (new mining area); and southwest quarter of southwest quarter of Section 12 and northwest quarter of northwest quarter of Section 13 (existing mining/processing area); all in Township 111N, Range 26W
Watershed (82 major watershed scale):	07020012
GPS Coordinates:	44°25'44.67"N, 93°54'40.89"W
Tax Parcel Number:	Parcels 10.011.5000 and 10.011.5100 for the new mining area, 10.012.7600 and 10.013.0200 for the existing mining/processing area

**At a minimum attach each of the following to the EAW:**

- County map showing the general location of the project;
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable); and
- Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.

**The following items are attached in the Appendix.**

Map 1 – General Location Map

Map 2 – Vicinity Map (U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries.)

Map 3 – Existing Conditions

Map 4 – Existing Land Use

Map 5 – Zoning Map

Map 6 – Soils Map

Map 7 – Prime Farmland and Farmland of Statewide Importance

Map 8 – Hydrologic Soils Group Map

Map 9 – Water Resources, including National Wetland Inventory and Floodplains

Map 10 – Reclamation Plan

-Reclamation Plan

-Well Logs

-Natural Heritage Information System Response

## 6. Project Description

- a. Provide the brief project summary to be published in the EQB Monitor, (approximately 50 words).

The project is an expansion of an existing sand and gravel mine. The expansion parcel is located across Minnesota Trunk Highway (MTH) 112 from the existing mine and processing plant. The total acreage of parcels with existing and proposed mining and processing activities is 152.92 acres. The expansion site will encompass 78 acres, of which no more than 49.3 acres will be mined. Mining involves the removal of overburden, excavation, crushing and screening and conveying the material. Mining will remove overburden to expose gravel, then the gravel will be conveyed under the highway for additional processing, stockpiling and sales at the existing processing plant. Reclamation will be concurrent with mining.

- b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.

The proposed project (Project) is the expansion of an existing sand and gravel mining and processing facility. The Project is south of the city of Le Sueur, in Ottawa Township, Le Sueur County. The general location of the proposed mine site is shown on Map 1. The Project boundaries (both the existing mining/processing area and the proposed expansion area) are shown on the USGS topo background in Map 2.


The Project involves advancing the current gravel mining on the east side of Minnesota Trunk Highway (MTH) 112 to the west side of the highway. This land, as well as the existing gravel mine land, is owned by the Mollenhauer family and leased to Traxler Construction, Inc (Proposer). This is the continuation of a mining program that has been pursued by Traxler Construction, Inc. since 1989 and by others before that, with mining on the parcel dating back to the 1950's. The existing gravel mining operation is "grandfathered in" and does not operate under a Conditional Use Permit.

Traxler Construction, Inc. currently operates the active gravel mine and processing plant to the east of the proposed gravel mine expansion. The existing mine and processing area is in parcels 10.012.7600 and 10.013.0200, and consists of an operating sand and gravel mine and processing equipment. The two existing mining/processing parcels are 34.92 acres and 40 acres, for a total of 74.92 acres. The existing mining operation, with setbacks in place, has 23.81 acres open, for washing and piling processed materials. There are 20.21 acres open on the second parcel for crushing and screening. Reclamation has been done on all the side slopes. The pit floor is needed for processing at this time and will be reclaimed after the gravel is extracted.

The mining operations are proposed to expand into parcels 10.011.5100 and 10.011.5000. These parcels are 58 acres and 20 acres, for a total expansion parcels area of 78 acres. Currently, the expansion parcels are a cultivated farm field and an occupied homestead, with an area of shrubs and trees in the northeastern corner of the property. The area on the proposed expansion parcels that is inside the setbacks is 49.3 acres. This is the maximum that could be mined.

With the addition of the 78 acre proposed site parcels, the total acres for all four parcels will be  $34.92 + 40 + 58 + 20 = 152.92$  acres, which is under the Environmental Impact Statement threshold of 160 acres.

Existing conditions are shown on Map 3. Existing land use shows the area as Agricultural on Map 4 (from Le Sueur County zoning). The majority of land cover is shown as cultivated crops, with smaller portions of shrub/scrub and pasture/hay (from the National Land Cover Database).



The gravel mining on the expansion parcels will encompass no more than 49.3 acres, allowing for the required setbacks from property lines and road rights of way. The anticipated average depth of the mine will be 20 feet, becoming less as it goes further west. The Project is estimated at this time to last approximately 20 years. The life of the mining operation will be determined by the market demand and will be subject to changing market conditions. The anticipated rate of mining is to mine 5 acres a year at 10 feet deep or 3 acres a year at 18-20 feet deep.

Existing Mining/Processing Operations - The Proposer will continue mining and processing on the existing parcels, and is intending to use a backhoe to mine deeper into the floor of the existing mine, potentially into the water table 10-15 feet.

Expansion Phase 1 – starting in 2016 – Mining in parcel 10.011.5100 will begin in the southeast corner striping of black dirt, mining of aggregate of approximately 10 acres for a time period of 1.5 years. The crushing and screening plants are portable and will be operated on the new expansion parcels and the material will be conveyed under the highway and washed at the existing processing area.

Expansion Phase 2 – The Proposer would reclaim the southeast corner of parcel and begin mining the northeast corner for approximately 1.5 years. This process will continue working west in 10 acre parcels with reclamation being done at the same time until property is fully mined.

This proposal moves the active mining westward and does not change the capacity of the processing plants or the procedures and methods used to harvest the stone; therefore, it is anticipated that the potential impacts revealed in this (the proposed Traxler Construction Gravel Mine Expansion) EAW process would be similar to those experienced at the existing mine.

The mining involves the removal of overburden to expose the gravel. Traxler Construction, Inc. will strip black dirt and clay from the top of the aggregate base to be mined. The estimated depth of overburden (stockpiled as screening berms and for use in the final reclamation process) is 1 to 2 feet of black dirt (topsoil) and 1 to 2 feet of clay. Both the overburden and the gravel material will be removed by the mobile mining equipment. Topsoil and overburden will be moved internally within the overall mining areas and used to construct berms and to complete reclamation of the existing mining areas, or it will be stored for later use in reclamation. No topsoil will leave the Project site.

Crushing and screening will occur on the expansion parcel. Once exposed, the gravel is conveyed to the existing processing plant located to the east of MTH 112, shown on Map 2. It will be necessary to reroute and/or temporarily close MTH 112 in order to construct a culvert under the highway to transport material to the existing processing plant. The Proposer, Mn/DOT and the County are developing a temporary closure plan. The length of time that MTH 112 will be closed for this construction is 5 days. Discussion of the impact of the Project on road infrastructure is discussed in Item 18. Traffic.

The expansion parcels' mined area will surround two active homes. One of the homes is on expansion parcel 10.011.5000, and one is on a separate parcel (10.011.5400) that is not part of this Project. Measures to be taken to minimize noise, dust and visual impacts are discussed in the applicable items of this EAW.

A Concept Reclamation Plan has been prepared for the Project, which includes the entire mining area. The Reclamation Plan (Map 10) illustrates proposed reclamation grades. Reclamation activities will be ongoing as mining is completed in an area. Graded or backfilled areas or banks shall be covered with sufficient topsoil, based on the availability of existing topsoil, to provide for revegetation. Where back-sloping exists, rate of the slopes shall not be less than four (4) feet horizontal to one (1) foot vertical. Banks shall be covered with available topsoil and seeded.

Traxler Construction, Inc. will keep and stockpile whatever topsoil and clay material it can from the top of the surface; keeping this material for reclamation. Clean topsoil and clay may be brought in from



construction projects and used in reclamation. Back sloping will be done as material is removed; this sloping will be done with filling using sand, clay, and other available topsoil materials. Backfilled slopes will be replanting with native grasses and forbs as listed in the Reclamation Plan.

Some of the 4:1 perimeter slopes of the existing mine have been backfilled and reclaimed. The floor of the existing mining and processing parcels is currently open to allow for processing and stockpiling activities. The floor is planned to remain without topsoil or vegetation as part of reclamation since it will eventually be developed into outdoor storage or a building site of some type. The proposed reclamation grades are shown on the Reclamation Plan Map 10 for both the proposed and the existing parcel. The proposed waterbody the Proposer is intending to create on the currently mined southern parcel is also shown.

Traxler Construction, Inc. will be using the floor of the pit to store material as it is made, so that the active working area will be over 10 acres. As a large enough floor is created from the mining activity, reclamation will progress on the floor of the pit as well as the 4:1 perimeter slope. Reclamation will be the process of spreading out the available topsoil materials on the pit floor and seeding it with native grasses and forbs.

The end product for the gravel pit will be a contoured area with various blends of native grasses, some that are seeded manually and some that will come naturally, and in time trees will seed themselves. See the reclamation plan attachment for more detailed information regarding the reclamation process.

There are no railroads, overhead power lines, gas or liquid pipelines in the vicinity of the Project. Other new or expanded utilities, infrastructure or public services will not be required to serve the proposed project.

c. Project magnitude:

Total Project Acreage	78 acres of new mining parcels, for a total of 152.92 acres over 4 parcels
Linear project length	
Number and type of residential units	
Commercial building area (in square feet)	
Industrial building area (in square feet)	
Institutional building area (in square feet)	
Other uses – specify (in square feet)	
Structure height(s)	The tallest equipment at the existing processing plant site is a 100-ft long conveyor that is approximately 80 ft tall

d. 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 Proposer has leased land west of its existing mine for the purpose of continuing its business of mining gravel. The project will not be carried out by a governmental unit. The mining and processing of the gravel provides the material needed in the construction and agriculture industries. The beneficiaries of the project will be Traxler Construction, Inc. (the Proposer), the Mollenhauer family (the land owners),

developers, contractors and the nearby community that will use the material for construction and agriculture.

- e. Are future stages of this development including development on any other property planned or likely to happen? ☐ Yes ☒ No

If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

It is not likely that the adjacent land would be mined in the future.

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.

The project involves advancing the current gravel mining on the east side of MTH 112 to the west of the highway shown on Map 2. This land, as well as the existing gravel mine land, is owned by the Mollenhauer family and leased to Traxler Construction, Inc. This is the continuation of a mining program that has been pursued by Traxler Construction, Inc. since 1989 and by others before that. The existing mine does not have a Conditional Use Permit (CUP), as it was grandfathered in.

There has been no previous environmental review conducted on any portion of the Project.

## 7. Cover Types:

Estimate the acreage of the site with each of the following cover types before and after development:

	Before	After		Before	After
Wetlands	0	0	Lawn/landscaping	1.02	1.02
Deep water/streams	0	0	Impervious surface	0.71	0.71
Wooded/forest	5.32	0	Stormwater Pond	0.41	0.41
Brush/Grassland	24.09	0	Other (describe)		
Cropland	76.31	0	Gravel pit, eventually restored to a combination of grassland, woodland and pond	45.05	150.78
			<b>TOTAL</b>	<b>152.92</b>	<b>152.92</b>

## 8. Permits and Approvals Required:

List all known local, state and federal permits, approvals, certifications 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. *All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.*

Unit of Government	Type of Application	Status
Le Sueur County	Conditional Use Permit (CUP) for mine expansion	Applied for (decision pending EAW)
Le Sueur County	Permission to mine in County right-of-ways	To be requested
Minnesota Pollution Control Agency ("MPCA")	Air emissions	To be applied for as necessary. The Proposer has contacted the MPCA and has been referred to the Small

		Business Environmental Assistance Program. Waiting for a response.
MPCA	NPDES / SDS, National Pollution Discharge Elimination System/State Disposal System MNG49000 General Permit for non-metallic mineral mining and associated activities	Modification to be applied for as necessary
Minnesota Department of Natural Resources ("MDNR")	Water Appropriations	In process
MPCA	Industrial Stormwater Permit MNRNE38BJ for existing mine and processing area, which has a No Exposure Exclusion	Active, will be modified to include the mine expansion area
MnDOT	Permit for construction of conveyor culvert under MTH 112	In process

**Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 9-18, or the RGU can address all cumulative potential effects in response to EAW Item No. 19. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 19**

## 9. Land Use:

### a. Describe:

- i. Existing land use of the site as well as areas adjacent to and near the site, including parks, trails, prime or unique farmlands.

Traxler Construction, Inc. currently operates the active gravel mine and processing plant to the east of the proposed gravel mine expansion. Currently, the expansion parcels are a cultivated farm field and an occupied homestead, with an area of shrubs and trees in the northeastern corner of the property. The existing parcels are used for mining, processing and stockpiling activities. Nearby land uses include the bioenergy plant, rural residences, and agriculture. It has been in this use for many years. Land use maps are attached in the Appendix. Existing conditions are shown on Map 3.

There are no designated parks, recreation areas or trails on or in the vicinity of the Project.

Refer to Map 6 for soils locations and Map 7 for Prime Farmland and Farmland of Statewide Importance. Soil information from the Natural Resources Conservation Service (USDA Natural Resources Conservation Service identifies prime farmlands and farmlands of statewide importance within the boundaries of the proposed mining area. The U.S. Department of Agriculture defines "prime farmland soils" as soils that are best suited to food, feed, forage, fiber and oilseed crops. The soils that are considered prime farmland are 27A, Dickinson sandy loam; 94B, Terril loam; 206B, Kasota silt loam; and 1855B, Dickinson sandy loam, loamy substratum. There are 26.1 acres of "prime farmland soils" within the proposed expansion parcels' boundaries. Of that area, 18.7 acres are within the setbacks as part of the proposed expansion, and thus could be disturbed by mining. The U.S. Department of Agriculture defines "farmland of statewide importance" as land, in addition to prime farmlands, that is of statewide importance for the production of food, feed, forage, fiber and oilseed crops. The soil that is considered farmland of statewide importance is 41B, Estherville sandy loam. There are 25.5 acres of "farmland of statewide importance soils" within the proposed expansion parcels' boundaries. Of that area, 14.2 acres are within the setbacks as part of the proposed expansion, and thus could be disturbed by mining. More information about the criteria for prime and important farmland can be obtained at the local office of the Natural Resources Conservation Service.

- ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.

Existing land use shows the expansion parcels as Agricultural on Map 4. The majority of land cover is shown as cultivated crops, with smaller portions of shrub/scrub and pasture/hay. The existing nearby land uses include gravel mining, biofuel plant, residences and agriculture. The proposed mined area will surround two active residences, shown on Map 3. There are no known railroads, overhead power lines, liquid or gas pipelines in the near vicinity.

Le Sueur County has adopted a zoning map ([http://www.co.le-sueur.mn.us/document\\_center/ZONINGaerial\\_Reduced.pdf](http://www.co.le-sueur.mn.us/document_center/ZONINGaerial_Reduced.pdf)) and zoning ordinances ([http://www.co.le-sueur.mn.us/document\\_center/ZoningOrdinance.pdf](http://www.co.le-sueur.mn.us/document_center/ZoningOrdinance.pdf)). The Project site is in the Agricultural zoning district. This district allows mineral extraction as a Conditional Use. The Project site is also in the Mineral Resources Overlay District and Le Sueur Municipal Airport's Safety Zone C. The Airport Zoning regulates the height of buildings and vegetation around the airport. No buildings will be added as part of this Project, and none of the trees in the reclamation plan will be taller than the existing trees on the Project site.

The County has a Comprehensive Plan adopted July 24, 2007 ([http://www.co.le-sueur.mn.us/document\\_center/Le\\_Sueur\\_County\\_Comprehensive\\_Land\\_Use\\_Plan.pdf](http://www.co.le-sueur.mn.us/document_center/Le_Sueur_County_Comprehensive_Land_Use_Plan.pdf)) and gravel mining at the Project site complies with the Comprehensive Plan. Goal #6 in the Comprehensive Plan set forth plans to prevent development on areas identified as aggregate resources. The Project site is identified as "High Value Aggregate" in the Aggregate Resource Areas figure in the Comprehensive Plan.

- iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.

There are no FEMA floodways or protected waters within the project boundary, as shown on Map 9. The Project is not within a shoreland zoning district nor a state or federally designated wild or scenic river land use district.

- b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.

Since the Project area and the surrounding land is zoned for agriculture and mining, land use incompatibility is not anticipated.

- c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 9b above.

The Proposer will continue to follow the best management practices that it currently follows for the existing mining area, and will follow the requirements of the pending CUP.

## 10. Geology, Soils and Topography/Land Forms:

- a. Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.

Minimum depth (in feet)		Average depth	
Bedrock	155	Bedrock	198

Information for depth to bedrock from well logs for wells 647224, 469312, 129234, 161349, and 129228. Only two had a depth to bedrock reported. Well 129228 reported a depth of 155 feet to the Prairie Du Chien Group, and well 129234 reported a depth of 240 feet to the Jordan Sandstone. There are no known geologic hazards in the vicinity.

- b. Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 11.b.ii.

**NOTE:** For silica sand projects, the EAW must include a hydrogeologic investigation assessing the potential groundwater and surface water effects and geologic conditions that could create an increased risk of potentially significant effects on groundwater and surface water. Descriptions of water resources and potential effects from the project in EAW Item 11 must be consistent with the geology, soils and topography/land forms and potential effects described in EAW Item 10.

<b>Acres</b>	49.3 (the area within the setbacks on the proposed expansion parcels)	<b>Cubic Yards</b>	The topsoil located above the gravel deposits to be mined will be moved during mining as described in item 6(b) (Project Description). The total amounts of these materials to be moved throughout the life of the project cannot be identified at this time. If the total area is 49.3 acres and the average depth is 18 feet, the total estimated volume would be 1,431,671 cubic yards. Estimated topsoil volume is 79,537 cy (depth of 1 ft), estimated overburden volume is 198,843 cy (depth of 2.5 ft), and estimated sand and gravel volume is 1,153,291 cy (depth of 14.5 ft).
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Soil types in and near the proposed area to be mined are shown on **Map 6**. **Map 8** shows the Hydrologic Soil Groups. Soil types present on the Project are:

Symbol	Map Unit Name	Hydrologic Soil Group	Highly Erodible, Potentially Highly Erodible, Not Highly Erodible?
41B	Estherville sandy loam, 1 to 6 percent slopes	A	NHEL
27A	Dickenson sandy loam, 0 to 2 percent slopes	A	NHEL
8B	Sparta loamy fine sand, 1 to 6 percent slopes	A	NHEL
1855B	Dickenson sandy loam, loamy substratum, 2 to 6 percent slopes	A	NHEL
94B	Terril loam, 1 to 8 percent slopes	B	NHEL
611C	Hawick sandy loam, 6 to 12 percent slopes	A	NHEL
206B	Kasota silt loam, 1 to 6 percent slopes	C	NHEL

Due to the high infiltration rate of A soils, if wastes or chemicals were spilled, they would infiltrate rapidly. There will not be pesticides, fertilizers or other chemicals spread in the mine area. There will not be any permanent or temporary storage of chemicals in the mine area. If there were an accidental spill of fuel or fluids from the mining equipment, spill containment kits are available to handle the spill.

The Natural Resources Conservation Service has stated that there are no highly erodible soils in the proposed mine site. (USDA Natural Resources Conservation Service, Highly Erodible Soils, Le Sueur County, Minnesota). No steep slopes (defined as greater than 12 percent slopes) have been identified. Reclamation will be ongoing with the mining process. Once an area has been completely mined, it will be covered with stockpiled topsoil and seeded with grasses to prevent erosion as described below. Graded or backfilled areas or banks shall be covered with sufficient topsoil, based on the availability of existing topsoil, to provide for revegetation. Where back-sloping exists, rate of the slopes shall not be less than four (4) feet horizontal to one (1) foot vertical. Banks shall be covered with available topsoil and seeded.

Traxler Construction, Inc. will keep and stockpile whatever topsoil and clay material it can from the top of the surface; keeping this material for reclamation. Back sloping will be done as material is removed; this sloping will be done with filling with sand, clay, and other available topsoil materials. Replanting will be done with native grasses and forbs, as listed in the Reclamation Plan.

With the estimated progress of mining into the embankment, Traxler Construction, Inc. will be active in reclamation at all times, so that there will not be ten (10) acres of slope area that is not reclaimed.

Traxler Construction, Inc. will be using the floor of the pit to store material as it is made, so that the area will be over 20 acres. But as a larger area of the floor becomes exhausted, reclamation will progress as the area becomes available. The reclamation will be the process of spreading out the available topsoil materials and seeding it with the recommended grasses and native vegetation. The end product for the gravel pit will be a contoured area with various blends of native grasses, some that are seeded manually and some that will come naturally, and in time trees will seed themselves, making a wildlife sanctuary.

## 11. Water Resources:

- a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.
  - i. Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.

The site is in the Minnesota River watershed, and is within 1 mile of and drains to River Segment 07020012-507, which is impaired for Fecal Coliform; Mercury in Fish Tissue; PCB in Fish Tissue; and Turbidity. The Minnesota River is to the west of the Project. The Project is not within 1 mile of Le Sueur Creek, which lies to the east. The location of the Project in relation to the Minnesota River and Le Sueur Creek is shown on Map 2.

There are no National Wetland Inventory wetlands, FEMA floodways, or protected waters within the project boundary, as shown on Map 9. The Project is not within a shoreland zoning district nor a state or federally designated wild or scenic river land use district.

The potential impacts of unmitigated mining in the Project area are increases in storm water runoff quantity and decrease in surface water quality. These impacts will be mitigated by using infiltration, reclamation using natural grassland vegetation, and other applicable BMPs wherever feasible. Surface water will be allowed to infiltrate into the ground, thus lessening the runoff rates when compared to



existing runoff rates. The stormwater system will be designed to ensure that runoff quantity leaving the site will not increase and that the water quality will be maintained or improved.

- ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

Minimum depth (in feet)		Average depth	
Groundwater	84	Groundwater	101

No dewatering or additional wells are anticipated. The existing processing equipment has a supply well and that use will not change. No chemicals are used in the mining process at the current gravel mine site. Spill containment kits are available should there be a spill or leak of fuel or engine fluid from the mining equipment.

The Minnesota County Well Index showed five wells in the general vicinity. Information for depth to groundwater is from well logs for wells 647224, 469312, 129234, 161349, and 129228. These well logs are attached in the appendix. All five wells had a depth to static water level reported. The Project is not within a wellhead protection area.

There is not a well to supply drinking water for the existing mine employees. Employees are provided bottled water for drinking. This practice will be continued for the Project.

There is a water supply well (no well number) at the existing mine that provides make-up process water to the existing wash plant, which has been operating since 1982. The well log is attached in the appendix. There have never been any well interference issues and the Project will not increase the amount of make-up water used. The gravel from the proposed mine will be conveyed under the highway to the existing mine processing area where it will be washed. All wash water is discharged into a series of sedimentation ponds. Water from the final pond is recycled back to the wash plant for reuse. Some water placed in the ponds infiltrates into the ground, as the ponds are not lined.

The Proposer has leased the existing homestead located within the Project boundary, and there is another active residence that will be surrounded on the east and west sides by the proposed mine. There is a well associated with each of those homesteads (Well Numbers 469312 and 647224). No change to the wells associated with these homesteads is anticipated.

There will be no mine site dewatering. Any material extracted below the water table will be removed by a backhoe.

- b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.
  - i. Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.
    - 1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.

No wastes will be discharged into a publicly owned treatment facility. Portable toilet facilities will be utilized at the proposed site, so no sanitary wastewater will be produced. No municipal wastewater will be produced by the mine.

- 2) If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.

No mining wastes will be discharged into a SSTS. The existing houses and other buildings on site will not be impacted by mining. Any municipal wastewater generated by these homes will be disposed of by the existing SSTS.

- 3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.

No mining wastes will be discharged into a surface water. The only wastewater generated by the mine project will result from the processing (washing) of the gravel. All wash water is discharged into a series of sedimentation ponds. Water from the final pond is recycled back to the wash plant for reuse. Some water placed in the ponds infiltrates into the ground, as the ponds are not lined.

- ii. Stormwater - Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.

This item identifies the selected technique for long-term treatment of storm water runoff, as well as rate and volume mitigation measures meeting State, County and Township requirements. The goals of this item include the following:

- Identification of waters receiving runoff from the mining area.
- Limitation of post-mining discharges to pre-mining discharges for the 2-, 10-, and 100-year rainfall events.
- Emphasis on importance of reducing runoff volumes typically seen with mining.
- The design elements that are recommended to be put in place for each of these factors to provide protection for the drainageways/river are as follows:
  - There will be no increase in either the volume or rate of discharge from the storm water treatment facilities from any design storm with a statistical recurrence interval of less than two years.
  - Storm water management systems will infiltrate storm water.

The storm water management system for the Project area will be designed to manage runoff so as to prevent negative impacts upon the Minnesota River water quality.

### **Quality and Quantity of Storm Water Before and After Mining**

The volume and rate of runoff water generated by the Project area is expected to be lower during mining due to the excavation nature of the process and the infiltration occurring, and once the mined area has been reclaimed, the volume and rate are expected to be similar to a grassland. There will be more Total Suspended Solids (TSS) during mining, but once the mined areas are reclaimed, the vegetation is expected to lower the TSS. It is the Proposer's goal to make sure the storm water quantity and quality stay the same as or better than current conditions.

## **Changes in Runoff Due to Land Use Changes**

Currently, the land use in the study area that is proposed to be mined is agricultural. See land use discussion in Item 9. Runoff quantity and quality is typically changed when an area is converted between natural grassland, agriculture, active mining and reclaimed landscapes. Agricultural row crops, which require plowing each planting season, disturb the soil and cause increased runoff when compared to natural grasslands. Often herbicides, pesticides and fertilizers are used on agricultural lands, some of which is picked up by stormwater. Mine sites, due to the nature of the excavation process, typically infiltrate more runoff, do not use herbicides, pesticides or fertilizer, but do provide higher loadings of TSS than natural grasslands. Intact ecologic and hydrologic functions in natural grasslands control the nutrient export of these natural vegetation systems. Reclaimed mine areas function similar to natural grasslands in terms of stormwater quantity and quality. These factors are discussed below.

## **Volume**

Volume of runoff is directly related to land uses. The runoff from agricultural areas can be extremely high in volume, high in sediment load and high in nutrients. The change from intense agricultural to mining land uses leads to changes in watershed hydrology and pollutant load rates, and due to the excavation nature of mining, can actually lead to a reduction in volume of runoff because water does not leave the mine and eventually infiltrates into the ground. Once the mined areas are reclaimed, they act similar to grasslands. The high soil infiltration rates in natural grasslands lead to low surface runoff rates. In most cases the surface runoff rates are less than 10% of the annual precipitation for these plant communities.

## **Pollutants**

A scientific literature review and discussion of hydrologic regimes, nutrient cycling mechanisms and phosphorus loading factors for natural plant communities was completed as part of the Detailed Assessment of Phosphorus Sources to Minnesota Watersheds - Non-Agricultural Rural Runoff Technical Memorandum for the Detailed Assessment of Phosphorus Sources to Minnesota Watersheds prepared for the Minnesota Pollution Control Agency (2004). Human activities in urban watersheds lead to a larger range of pollutants and greater quantities of these pollutants when compared to natural vegetative land cover. The high soil infiltration rates in natural plant communities lead to low surface runoff rates, little soil loss via erosion and thus low rates of nutrient (total nitrogen and total phosphorus) export to surface waters. In most cases the phosphorus export rates for natural plant communities are below 0.169 kilograms of phosphorus per hectare per year (0.151 pounds per acre per year).

The runoff from agricultural areas can be extremely high in volume, high in sediment load and high in nutrients (fertilizers), herbicides and pesticides. Agricultural land uses, especially crop production, typically generates higher runoff sediment loads than either urban or natural conditions. The increased runoff, along with human activities, increases the types of pollutants and delivery rate of these pollutants to surface waters. The impacts of the increased runoff volumes and pollutant mass to downstream waters often lead to declines in water quality and ecological function.

The increased loading of nutrients, especially phosphorus, leads to eutrophication of lakes and wetlands, as well as stream systems. The resulting eutrophication leads to increased algal growth, decreased water clarity and loss of recreational uses, as well as human health concerns, increased periphyton growth and increased treatment costs for industrial uses of water. Remediation of the resulting water quality problems is costly and many times may not fully restore water to the pre-impacted conditions.

The use of herbicides, pesticides and fertilizers in agriculture raises questions about their impacts on water resources and how they can be controlled. Minnesota state law now prohibits the use of phosphorus containing fertilizers on turf grass except during the establishment periods. This has reduced the contribution of phosphorus from this source. Pesticides running off into streams is a concern in any area where there are farm fields near riparian habitats. The use of infiltration and the absence of pesticides and fertilizers used in the Project area will reduce pesticide levels in nearby rivers, wetlands and streams.

The change from intense agricultural to mining land uses can actually lead to a reduction in some pollutants and thus improvements in water quality, because reclamation will be ongoing with mining activity, and once a portion of the Project has been completely mined, it will be reclaimed into grassland with scattered trees. The change from agricultural uses to mining uses and eventually reclaimed land means that the soil won't be tilled up every year, thus reducing erosion caused by annual tilling and will reduce the amount of pesticide and fertilizer runoff as compared to active farming.

### **Infiltration Practices**

The majority of the soils within the study boundary are of HSG Type A, with small areas of Type B and C. See Map 8 for Hydrologic Classifications of soils in the EAW area. The Type A soils allow for high infiltration, the Type B soils allow for moderate infiltration, and the Type C soils are slightly slower. Stormwater during mining will be handled through infiltration. The close interaction of surface water and groundwater make it very important to determine depth to seasonally high groundwater, depth to bedrock, condition of bedrock and potential for groundwater mounding when considering infiltration practices for handling stormwater. The minimum depth to water reported for five nearby wells was 85 feet below ground surface and the minimum depth to bedrock was 155 feet. Thus, even though the mine will remove soil that the water would have otherwise infiltrated through, adverse impacts from mine stormwater to the groundwater are not anticipated due to the adequate depth of the groundwater and bedrock. Once the areas have been reclaimed, infiltration will still be occurring. Natural grassland vegetation will also be established, which will help soak up and evapotranspire stormwater.

### **Storm Water Pollution Prevention Plans**

Adverse stormwater impacts will be mitigated by using infiltration, reclamation using natural grassland vegetation, and other applicable BMPs where ever feasible. Berming and/or diversion around mining areas will reduce the amount of stormwater entering the mined area.

Traxler Construction, Inc's existing gravel mine and processing plant, has an active industrial stormwater permit MNRNE38BJ, and has a No Exposure Exclusion. It is anticipated that the industrial stormwater permit will be modified to include the gravel mine expansion area.

Storm water runoff from the Project area travels west. The entire area is within the Minnesota River watershed, so the runoff from the area eventually drains to the Minnesota River.

Pre-development land use for the Project area is predominantly cultivated row cropland, which contributes higher amounts of phosphorus when compared to urban or undisturbed land uses. According to previous studies, agricultural runoff is usually considered a more important cause of phosphorus loading and lake eutrophication than is urban runoff.

Because a large portion of the soils in the Project area have high infiltration rates (Type A soils), infiltration will be used to reduce storm water volumes and recharge groundwater, as well as help reduce TSS loading.

Although the Minnesota River is not within the Project boundaries, the Project area ultimately drains to the River. The site is within 1 mile of and drains to River Segment 07020012-507, which is impaired for Fecal Coliform; Mercury in Fish Tissue; PCB in Fish Tissue; and Turbidity. Infiltration of stormwater at the Project site will help ensure that the Project does not adversely affect the Minnesota River, neither in quantity nor quality.

The potential impacts of unmitigated mining in the Project area are increases in storm water runoff quantity and decrease in surface water quality. These impacts will be mitigated by using infiltration, reclamation using natural grassland vegetation, and other applicable BMPs wherever feasible. The stormwater system will be designed to ensure that runoff quantity leaving the site will not increase and that the water quality will be maintained or improved.

- iii. Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.

There is a water supply well at the existing mine that provides make-up process water to the existing wash plant, which has been operating since 1982. The daily water pumped is 36,000 gallons per day (gpd), and the annual use is 1.5 million gallons per year (gpy). The wash plant can only run 94 gallons per minute (135,360 gpd) maximum and runs 10 hours a day, but the water used is recycled. Because of this, depending on the rain and water evaporation, the pump only runs when needed. There have never been any well interference issues and the Project will not increase the amount of make-up water used. The Proposer is in the process of getting a DNR appropriations permit for the well at this time. The appropriations permit is asking for 36,000 gpd and 1.5 million gpy (no change in current use levels). There will be no mine site dewatering.

#### iv. Surface Waters

- 1) Wetlands - Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed, and identify those probable locations.

There are no National Wetland Inventory wetlands within the project boundary, as shown on Map 9. The Project has almost entirely Hydrologic Soil Group Type A soils, which have a high infiltration rate, so no wetlands are anticipated on the site.

- c. Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

There are no FEMA floodways or protected waters within the project boundary, as shown on Map 9. The Project is not within a shoreland zoning district nor a state or federally designated wild or scenic river land use district. No physical modifications to existing surface waters are anticipated. Depending on the amount of material removed from the expansion parcels, a small pond is anticipated to be part of the Reclamation Plan.

## 12. Contamination/Hazardous Materials/Wastes:

- a. Pre-project site conditions - Describe existing contamination or potential environmental



hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

The existing house and other buildings on site will not be impacted by mining. Any municipal waste generated by use of these buildings will be disposed of by a licensed waste hauler. As such, no Contingency Plan or Response Action Plan will be developed.

A search of the MPCA's What's in My Neighborhood website found there are no known environmental hazards on the Project expansion parcels due to past site uses. Nearby activities that are listed are for Hometown BioEnergy, which is immediately to the north of the existing mining/processing parcels and has multiple MPCA listings: An active construction stormwater permit C00035028, effective start 12/14/2012; an active tank site 125882 (3 aboveground tanks installed September 2013); an active air permit 07900050, effective start 5/3/2012; and an active wastewater discharge permit MN0070149, effective start 4/30/2012 and a minor permit modification 6/16/2014. This is a separate entity from the Project, and the Proposer has no control over the operation of this facility.

- b. Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.

No solid or hazardous wastes will be generated or stored on site as part of the mining process.

- c. Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.

No blasting agents will be used as part of the mining process. No toxic or hazardous materials will be used on site as part of the mining process. There are no below ground tanks to store petroleum product or other materials on the existing mine area nor on the proposed mine area. There are 2 aboveground tanks on the existing site for the crushing spread: 1,000-gallon diesel fuel tank that is stationary, and 250-gallon (on wheels) diesel fuel tank. The 250-gallon tank on wheels will also be used in the expansion area when the crushing equipment is moved there. The wash plant runs on electricity, so does not have any fuel tanks.

- d. Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.

No hazardous wastes will be generated or stored on site as part of the mining process.



### 13. Fish, Wildlife, Plant Communities, And Sensitive Ecological Resources (Rare Features):

- a. Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.

Wildlife in this part of Le Sueur County includes deer, coyote, turkey, raccoon, rabbit, squirrel, pheasant, skunk, woodchuck, groundhog, gopher, and other birds common in the area.

- b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-\_\_\_\_) and/or correspondence number (ERDB \_\_\_\_\_) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

DNR Natural Heritage and Non-game Research Program Correspondence Reference No. ERDB 20150194 identified no known occurrences of rare species or native plant communities on the Project site nor within a 1 mile radius of the area. The letter is included as an appendix.

- c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

The proposed project may displace the wildlife population that uses the open areas for protection, food and cover. If wildlife is present, it may relocate to other nearby habitat in the area until mining is over. Some species may return after mining and some others may be permanently displaced.

The increased development and spread of diseases such as Dutch Elm Disease and Oak Wilt have impacted trees and woodlands in this region. Trees infected with Dutch elm disease or oak wilt must be removed promptly so they don't infect healthy trees.

- d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.

Mitigation for loss of wildlife habitat will be through reclaiming the mined areas. Planting of grasses and trees and creation of a pond will provide higher quality wildlife habitat than the agricultural field that is currently on the Project site.

In order to prevent the spread of tree diseases, the Proposer will be encouraged to avoid carrying out clearing operations in the wooded areas during the peak infection period (April – June), and to treat oak wilt prior to breaking ground.

Vegetation management in infrequently mowed areas – such as ditches and along utility access roads – should be done mechanically (chemicals should not be used). Vegetation management should occur fall through spring (after October 1st and before June 1st).

### 14. Historic Properties:

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

According to the Minnesota State Historic Preservation Office's (SHPO) cultural resources database, three historical properties (LE-LSC-038, -039, and -040), one landscape (LE-OTW-010), and one archaeological site (21LE0095) have been recorded within one mile of the proposed mine expansion. The historical properties include a brewery cave and office and a barn that are located within a deep draw, more than ½ mile to the northwest from the proposed mine. These properties were considered not eligible for listing on the National Register of Historic Places in 2012.

White Rock Bluffs (LE-OTW-010) are an outcrop of Jordan Sandstone and the Prairie du Chien Group along the Minnesota River. First described by William Keating in 1824, these bluffs were purportedly used for raw material and as a regional gathering place. The Bluffs are as close as ½ mile from the proposed mine and will not be physically impacted.

Archaeological site 21LE0095 is a lithic scatter of unknown age. The property has not been evaluated, but is over ½ mile from the proposed mine and physical impacts to it are not anticipated. No known archaeological sites are located within the project area, however, SHPO does not have any records of an archaeological survey having taken place here and there may be archaeological materials that have not yet been identified.

## 15. Visual:

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

There is no lighting anticipated to be placed on the Project site. There is one light pole on the current mine site to light the scale shack. This light is a security light that turns on with a sensor. No adverse visual impacts are anticipated.

## 16. Air:

- a. Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used to assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

Stationary source air emissions from crushers, conveyors, or other stationary sources will not be changed as a result of this Project. The current processing equipment at the active gravel mine site will continue to process in the location and at the level as it has been.

The current gravel mine does not operate under a state air permit, therefore potential emissions are not available. The Project is not anticipated to need a state air permit. The Proposer has contacted the MPCA to inquire if a permit is required, and was referred to the Small Business Environmental Assistance Program. The Proposer contacted this office twice, with no response. The Proposer will cooperate with the MPCA if it is determined that the Project would require an air permit.

- b. Vehicle emissions - Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

Vehicle-related air emissions will not be changed as a result of this Project. Employee and customer vehicles will continue to be parked and loaded at the existing processing plant site located to the east of

the proposed mine. The trucks used to transport the gravel after processing will use the existing highway access point to the existing processing plant. The mining vehicles will operate in the same way they have been; no change to the number of vehicles or the rate they are operated is anticipated.

- c. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

The past years of experience with mining in this area has shown that the proposed Project will not generate odors. The Proposer has not received any complaints about dust, odors or noise in the more than 20 years of operation, and at times in the past the operation has been quite close to rural residences.

Levels of noise and dust for the Project will not be changed from the existing conditions. The Project would be mining at approximately the same rate, with the same methods as the current gravel mine, and during the same hours of the day. No additional gravel processing equipment is proposed to be constructed, and the existing equipment will operate during the same hours of the day as it currently does. The Project is not anticipated to change the noise and dust levels from what is currently occurring. No blasting will take place as a part of this Project.

The current gravel mine does not operate under a state air permit, therefore potential emissions are not available. The Project is not anticipated to need a state air permit. The Proposer will cooperate with the MPCA if it is determined that the Project would require an air permit.

## 17. Noise

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including: 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

The Project would be mining at approximately the same rate, with the same methods as the current gravel mine, and during the same hours of the day. No blasting will be done as a part of this Project. No additional gravel processing equipment is proposed to be constructed, and the existing equipment will operate during the same hours of the day as it currently does. The Project is not anticipated to change the noise levels from what is currently occurring.

The expansion parcels' mined area will surround two active homes. One of the homes is on expansion parcel 10.011.5000, and one is on a separate parcel (10.011.5400) that is not part of this Project. No adverse potential impacts on the homes and residents are anticipated, and the homes will remain throughout the life of the Project. The current mine and wash plant are within 100 yards of another farmstead and there have been no complaints of noise or dust.

The noise-generating activities that will take place on the surface will be created by the mobile mining equipment (including excavators, front-end loaders, and haul trucks) involved in the overburden excavation, transport, placement, as well as post-mining surface restoration. Post-mining surface restoration involves use of heavy construction equipment to replace topsoil and large agricultural machinery to seed the area with native plantings. The noise impacts from these operations will be of short duration and likely not be audible beyond 300 feet depending on a variety of factors such as relative location, foliage, weather, and season.

The remaining noise-generating activities will be taking place up to 20 feet below grade in the floor of the mine. These include crushing, material transport to the conveyor, uncovered conveyor transport, and enclosed processing buildings. Noise from activities in the pit will be shielded from surrounding areas by the mine face as well as screening berms.

The Proposer will construct berms along the Project boundaries where necessary to screen the mining activities from public view as may be required as part of operation conditions established during the permitting process. While the primary purpose of the berm is to mitigate visual impacts, the berm will also have some mitigating effect on both noise and dust.

Operations at the Project site are governed by noise standards promulgated by the MPCA. The noise standards, which are included in Part 7030 of the Minnesota Rules, contain limits on noise levels at three Noise Area Classifications. The noise standards are specified in terms of two metrics: L10, which is the level exceeded ten percent of the time, and L50, which is the level exceeded fifty percent of the time (Minn. R. 7030.0020). Continuous noise is governed by the L50 standard, while transient noise is governed by the L10 standard. Mining activities fall under Noise Area Classification 3 (NAC-3) (Minn. R. 7030.0050). The standards are receiver standards, in that they apply to land uses outside of the noise source property. Noise is measured outdoors at the “point of nearest human activity,” not the boundary of the nearest land use (Minn. R. 7030.0060). Therefore, even though mining falls under NAC-3, the standards used will be for the residential receivers in the vicinity of the Project (NAC-1). The MPCA residential NAC-1 daytime L10 standard is 65 dBA, the daytime L50 standard is 60 dBA, the nighttime L10 standard is 55 dBA, and the nighttime L50 standard is 50 dBA.

#### MPCA Standards

Time Period	Noise (dBA)	
	L10	L50
MPCA NAC-1 Daytime Standard	65	60
MPCA NAC-1 Nighttime	55	50

Existing methods will be used and no additional equipment or operations will be associated with the new mine area. One difference is that the distance from the mine area to the existing processing facility will increase when mining is relocated to the Project expansion parcels, but the product will be transported to the processing facility through conveyors, producing no significant noise.

The Proposer will mitigate noise impacts from the Project through continued adherence to state noise requirements, and setback requirements. The Proposer will comply with the maximum daytime and nighttime noise standards prescribed by the then current Minnesota Rules 7030, as well as any other requirements that are determined during the permitting process. The Proposer will ensure that all mobile and stationary production equipment meets state and federal guidelines on noise. Sight berms will be constructed where necessary surrounding the Project area.

Based upon past experience, no exceedences of the Minnesota standards at any of the residences are predicted for daytime or nighttime mining operations. If any issues should arise, Traxler Construction, Inc. would address them.

## 18. Transportation

- a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.

Parking spaces added	NA
Existing spaces (if project involves expansion)	NA
Estimated total average daily traffic generated	NA
Estimated maximum peak hour traffic generated (if known)	NA
Time of occurrence	NA

There is an existing parking area with the existing mine site east of MTH 112 where employee and customers park. However, the existing parking area is a gravel surface and there are no markings designating the number of parking spaces.

The Proposer intends to move the active mining operation westward, to the proposed mine site west of MTH 112. However, the proposer intends to keep the processing plant in the existing location east of MTH 112. The Proposer has requested that a 60-inch steel culvert be constructed under MTH 112 to allow the gravel to be conveyed underneath the highway to the existing processing plant on the east side of the highway. The Proposer and Le Sueur County are developing a temporary road closure and detour plan to allow construction of the culvert and conveyor system under MTH 112. Traffic will be detoured for a short period of time while the culvert is constructed under MTH 112. After the construction is completed, traffic levels and patterns are anticipated to revert to the existing levels and access points.

The Project will be a continuation of the existing mining, and therefore will be a continuation of the existing traffic levels. The Proposer does not intend to change the capacity of the existing processing plant or the procedures and methods used to harvest the stone; therefore, it is anticipated that no additional traffic will be generated and no additional parking will be needed. The mine related vehicle traffic volumes on public roadways should therefore remain similar to existing levels. According to the Proposer, these existing levels are: Approximately 35-45 trucks leave the site daily; approximately 15 trucks leave during the peak hour; and approximately 60 trucks leave during the busiest day.

With the move of active mining operations west of MTH 112, employees may change where they park as some may park at the existing mine near the processing plant while others may park at the active mine location. If this occurs, traffic patterns will change, however no major traffic impacts are anticipated.

The Annual Average Daily Traffic (AADT) on MTH 112 in 2011 was 820 vehicles. Historically between 1992 and today the AADT on MTH 112 has ranged between 820 vehicles (2011) to 1200 vehicles (1996). It is anticipated the AADT will remain within this range in the foreseeable future.

No transit or alternative transportation options are feasible or available.

The proposed mine expansion is located in Le Sueur County which is not in the Twin Cities metropolitan area and therefore has no direct impact on the Twin Cities regional transportation system.

- b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system.

*If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual,*

The Project is not anticipated to change traffic on nearby roads, for the reasons listed above. No traffic improvements are necessary.

- c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

No mitigation is anticipated, as traffic will not be changed by this Project.

## **19. Cumulative Potential Effects: (Preparers Can Leave This Item Blank If Cumulative Potential Effects Are Addressed Under The Applicable EAW Items)**

- a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

The primary cumulative potential effect of the proposed gravel expansion mine is a change of land use from agricultural to mining and eventually, to a reclaimed grassland with scattered trees that will provide wildlife habitat.

- b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.

There are other mines in the vicinity, including the current gravel mine that the Project proposes to expand, as well as Unimin's mines in Ottawa and Kasota, to name only a few. The Le Sueur County Comprehensive Plan includes an Extraction Areas figure showing many gravel pits, quarries, and sand pits in the County. As defined in MN Rules part 4410.0200, subpart 11a, for the purpose of describing cumulative potential effects, it is not required to list or analyze the impacts of individual past actions, it is sufficient to consider the current aggregate effects of past actions. The analysis in this item focuses on evaluating the contributions of past projects to cumulative potential effects. The current aggregate effects of past projects along with the future Project are considered in this evaluation. The Project's location within a Mineral Resources Overlay District and an area that has a number of active mining operations contributes most directly to past projects for which cumulative potential effects may be relevant.

- c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

The following items identify and discuss the cumulative potential effects based upon locating within the Mineral Resources Overlay District.

### **1. Wildlife Habitat and Natural Plant Communities**

Past projects, including agriculture, have resulted in the elimination of many of the original natural plant communities and wildlife habitat on both the Project Area itself as well as on property surrounding the Project Area which are primarily developed, mined or utilized for agriculture. Original vegetation has been removed over much of the Project Area and much of the surrounding properties. Wildlife habitat is now largely concentrated in the landscapes adjacent to the Minnesota River where the floodplain has limited past development and will limit future development. There are no native plant communities within the Project Area and only limited areas of wildlife habitat, therefore there is very little if any potential for cumulative effects to these resources as a result of this project. The Project will include reclamation of areas to be mined; future reclamation activities on the mining portions of the Project will have a positive impact on the biodiversity of the Project Area and surrounding areas. During the reclamation process,



water bodies will be created and native plant species will be re-introduced to the area, possibly adding biodiversity to an area currently devoid of diversity due to past development.

Mining activity is progressive in nature and reclamation occurs in phases along with the progression of mining so that 100% of the area will not be disturbed at one time. The majority of area currently subject to mining activity is subject to reclamation plans which have goals of reclaiming the area to provide more diverse and higher quality habitat than currently exists today. The Unimin North Mine and Kasota Mine are subject to reclamation plans and reclamation is an on-going process at those facilities. Therefore when considering the reclamation requirements and currently approved and proposed reclamation plans of nearby projects and the proposed reclamation plan of the Project itself, there is no potential for significant cumulative effect on wildlife and natural plant communities.

## 2. Ground Water Quantity and Quality

The area surrounding the Project Area is primarily gravel mining, agricultural, or the Hometown BioEnergy biofuel plant. Of the five wells nearby, two are used for irrigation and the other three are domestic supply. This Project does not include adding a well or dewatering, so no cumulative impacts on groundwater quantity are anticipated.

No chemicals are used in the mining process at the current gravel mine site. Spill containment kits are available should there be a spill or leak of fuel or engine fluid from the mining equipment. Cumulative potential effects to water quality are not anticipated as a result of the Project.

## 3. Surface and Wastewater

The Proposer intends to infiltrate stormwater into the ground as much as possible, thus lessening stormwater runoff volume and improve stormwater quality leaving the Project site.

Cumulative effects from existing or future projects could result from “run-in” if substantial impervious surface development directs excessive surface water to the Project Area. Impacts could result in water quality issues. The Le Sueur County Comprehensive Plan states that the areas of aggregate resources shall be protected from development pressure, so substantial impervious surface development is unlikely. Berming and/or diversion around mining areas will eliminate this potential cumulative effect.

The gravel processing water will be placed in the wash water pond and infiltrated into the ground, as the processing has been currently operating.

Wastewater generation will not be increased beyond what is currently produced at the existing gravel mine and processing equipment as a result of this Project, and thus cumulative effects are not anticipated.

## 4. Traffic

Cumulative effects to traffic in the area have been estimated to be minimal. The rate of mining and the location of the processing equipment will not change. Therefore, there will not be an increase in truck traffic in the area, nor a change in location where trucks would access the highway.

## 5. Air

The current gravel mine does not operate under a state air permit, therefore potential emissions are not available. The Project would be mining at approximately the same rate, with the same methods as the current gravel mine. No additional gravel processing equipment is proposed to be constructed. The Project is not anticipated to need a state air permit.

Hometown BioEnergy, to the northeast of the Project, has an active state air permit. There are other sand mining, sand processing, and quarry activities nearby to the proposed Project. The SMC pits and the Vetter Stone Quarry do not operate under a state air permit; therefore, their potential emissions are not available. However, Unimin operates with an individual state permit. From its air permit, the potential to

emit (PTE) particulate matter (PM) is 73.3 tpy and 36.7 tpy of PM10. This is considered a state permit in regards to air permitting rules.

Unimin voluntarily conducts perimeter monitoring for environmental exposure to airborne respirable nuisance dust, including silica. Although the purpose of this monitoring is used with comparison to the occupational standard of silica, results showed that none of the sampling events exceeded the occupational standard. In fact, none of the samples even resulted in Total Dust levels (which also include fugitive dust from organic topsoil and other nuisance dust) that were above the 0.1 mg/m<sup>3</sup> occupational industrial standard limit for respirable silica. In conclusion, it was determined that Unimin does not have a problem associated with ambient impacts of particulates or respirable silica dust.

The MPCA regulates individual air permits using federal and state guidelines. The MPCA also monitors cumulative potential effects using regional ambient air monitors and other statistical tools. The Proposer will cooperate with the MPCA if it is determined that the Project would require an air permit. In conclusion, the Proposer considers the cumulative effect from their facility to be insignificant, and that no further analysis is required.

#### 6. Noise

The Project would be mining at approximately the same rate, with the same methods as the current gravel mine, and during the same hours of the day. No blasting will be done as a part of this Project. No additional gravel processing equipment is proposed to be constructed, and the existing equipment will operate during the same hours of the day as it currently does. The Project is not anticipated to change the noise levels from what is currently occurring. The Project will not have a significant cumulative potential effect on noise levels at receptor sites within the area.

No are no anticipated further investigations before the project begins.

## 20. Other Potential Environmental Effects:

If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

There are no other potential environmental impacts that have not already been discussed above.

**RGU CERTIFICATION.** *(The Environmental Quality Board will only accept SIGNED Environmental Assessment Worksheets for public notice in the EQB Monitor.)*

#### 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 Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

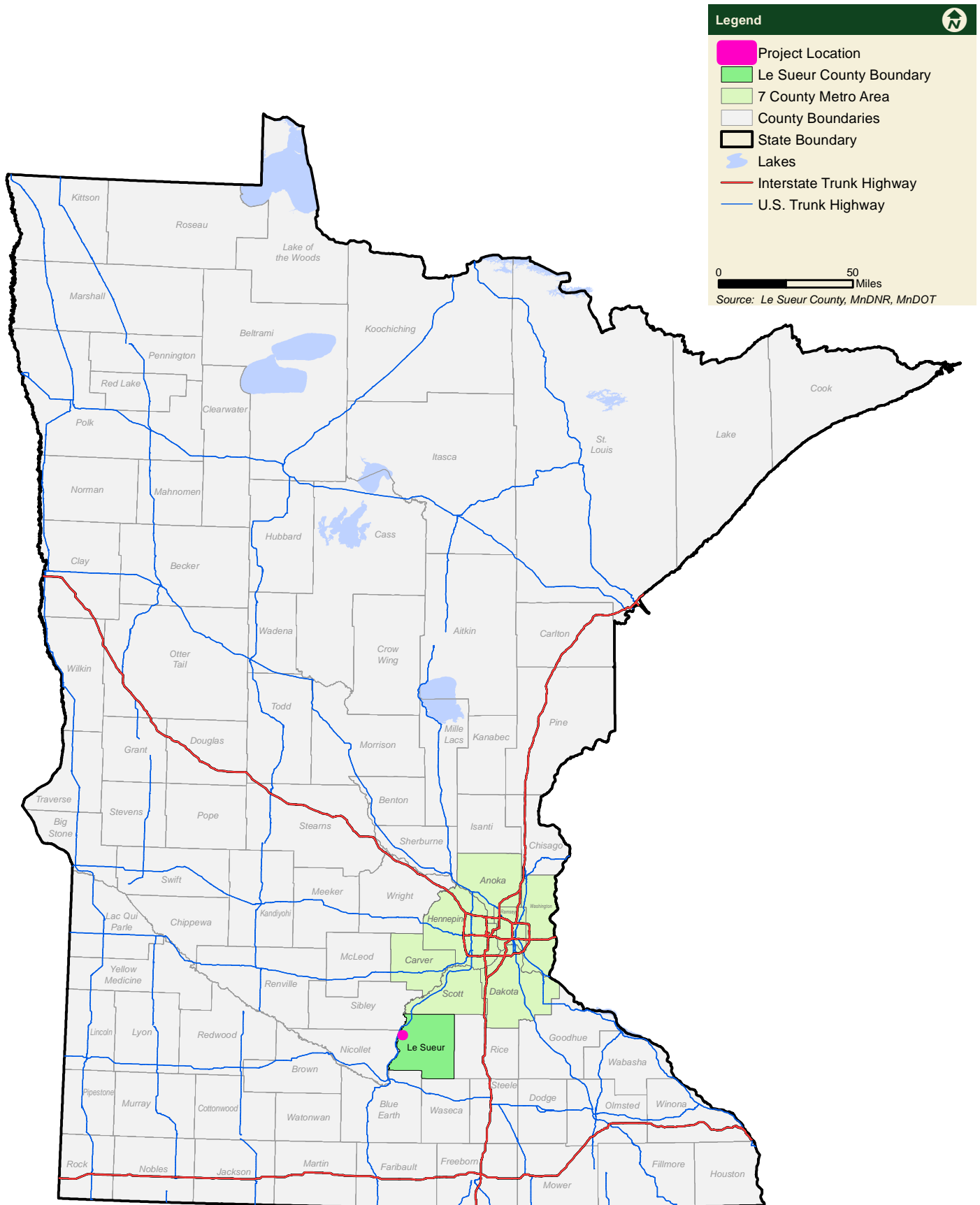
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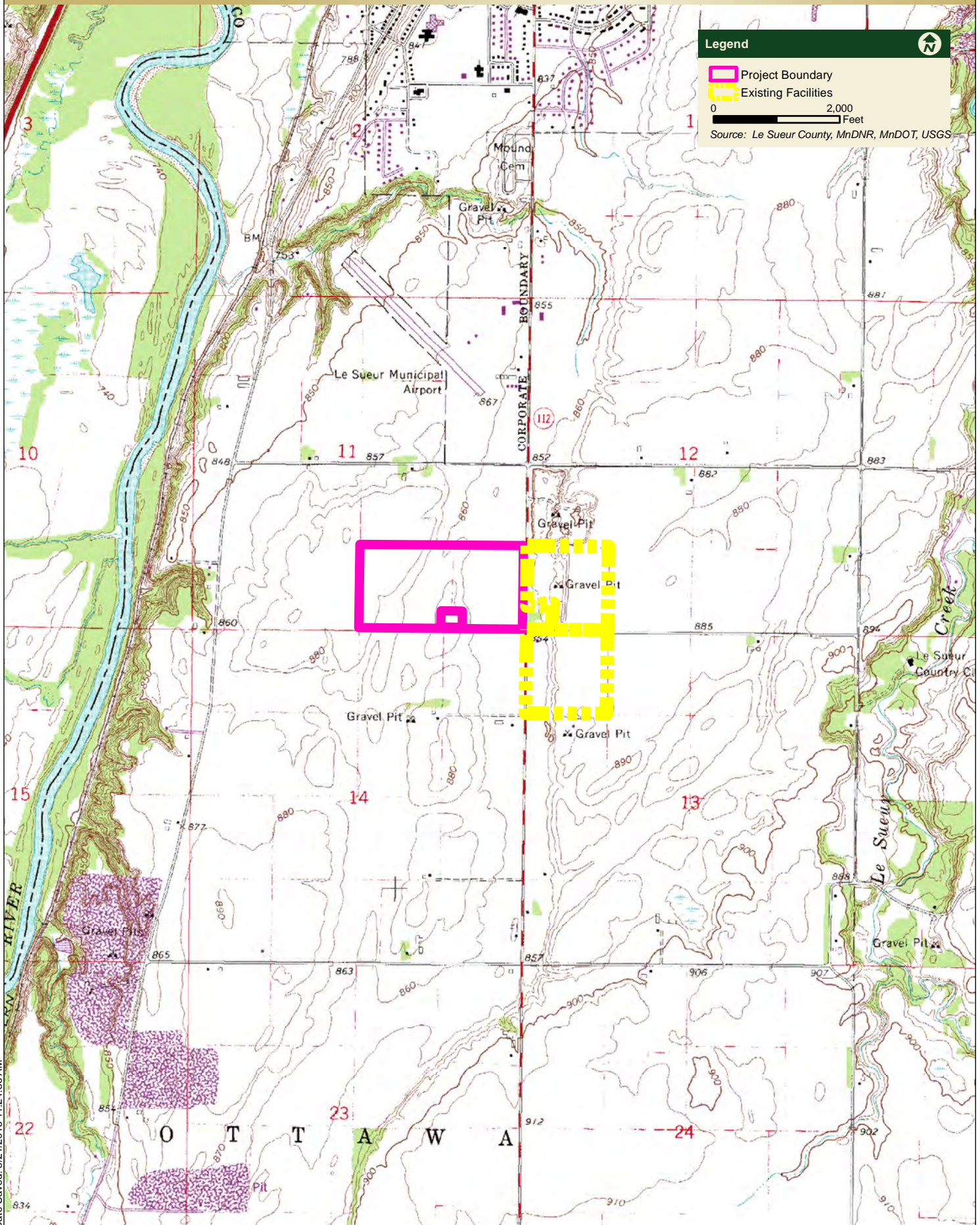


## Appendix



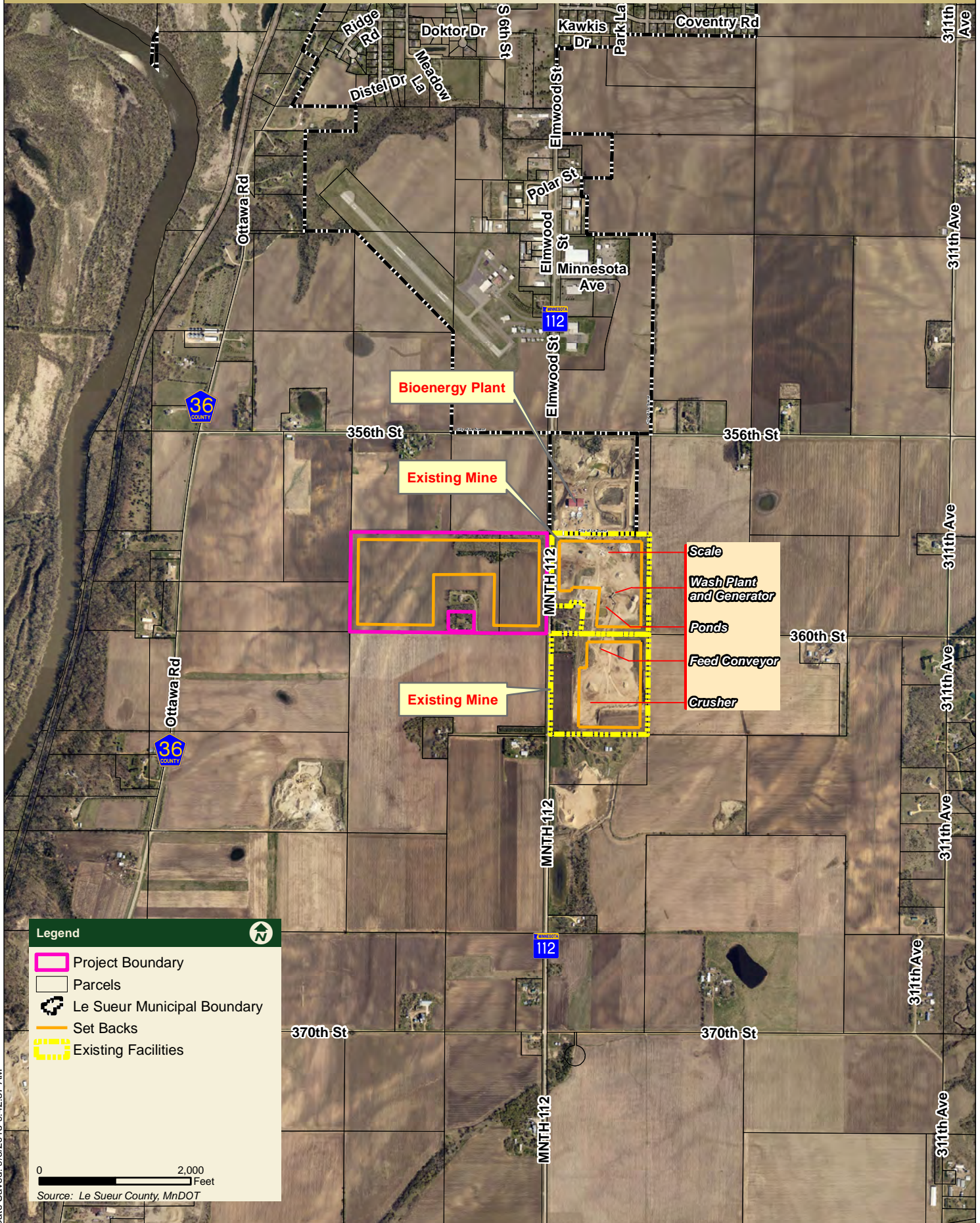
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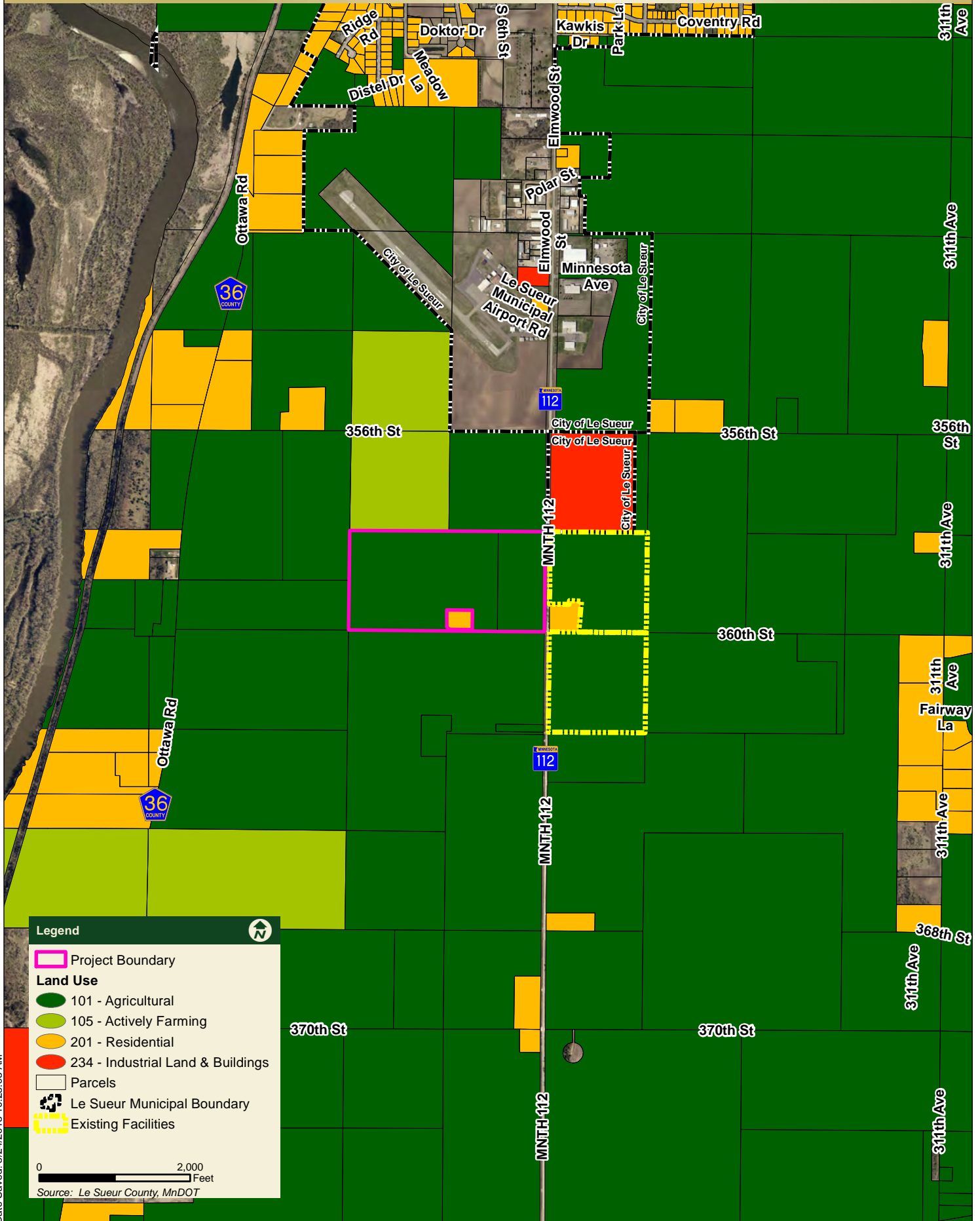
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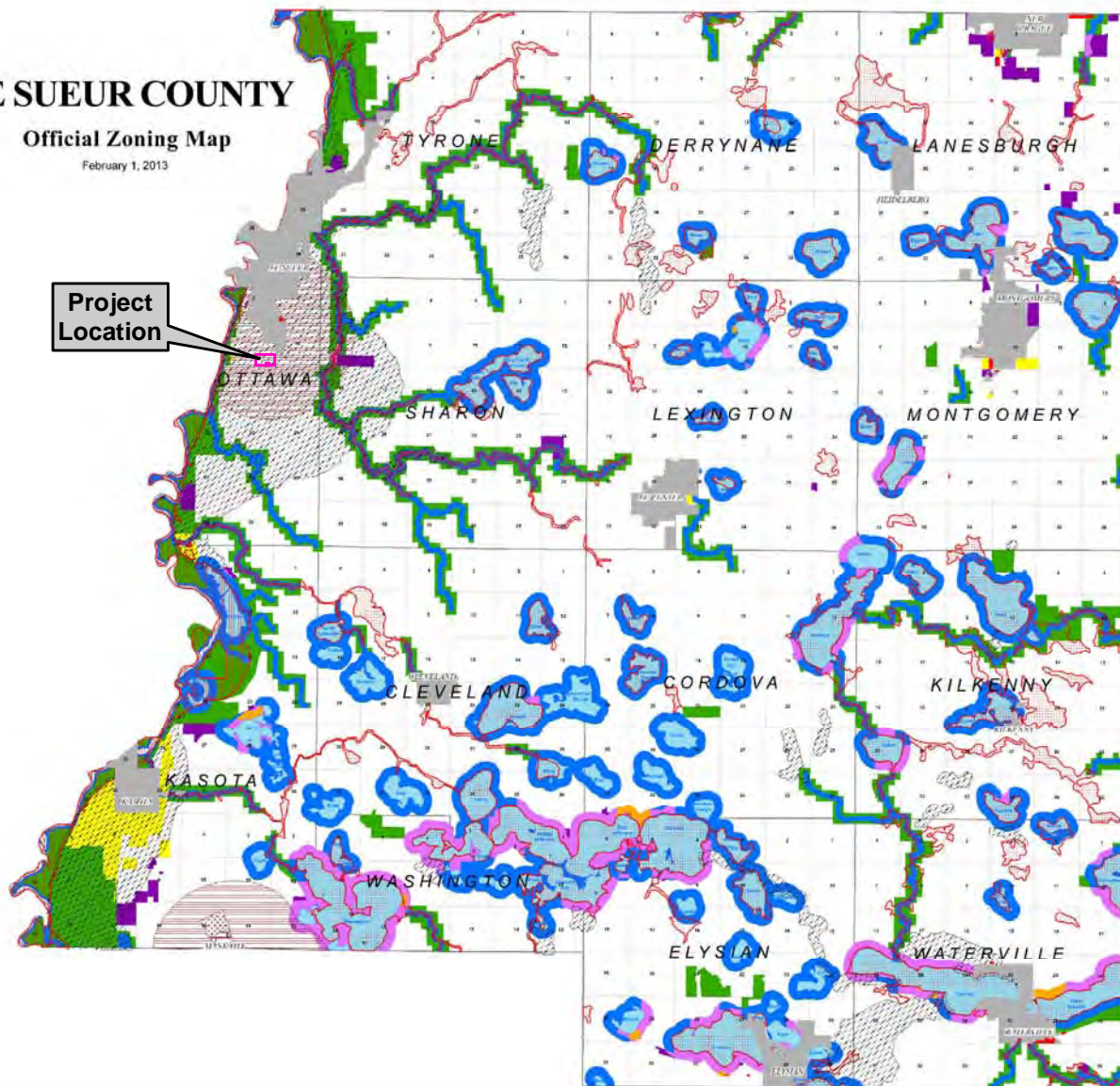
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# LE SUEUR COUNTY

## Official Zoning Map

February 1, 2013

Project  
Location



**LEGEND**

**Zoning Districts**

- Agricultural
- Conservancy
- Special Protection
- Recreational Commercial
- Recreational Residential
- Urban/Rural Residential
- General Business
- General Industry

**Overlay Districts**

- Minor Resources
- Flood Plain
- Flood Fringe
- Floodway
- Airport
- Zone A
- Zone B
- Zone C

**Lakes**

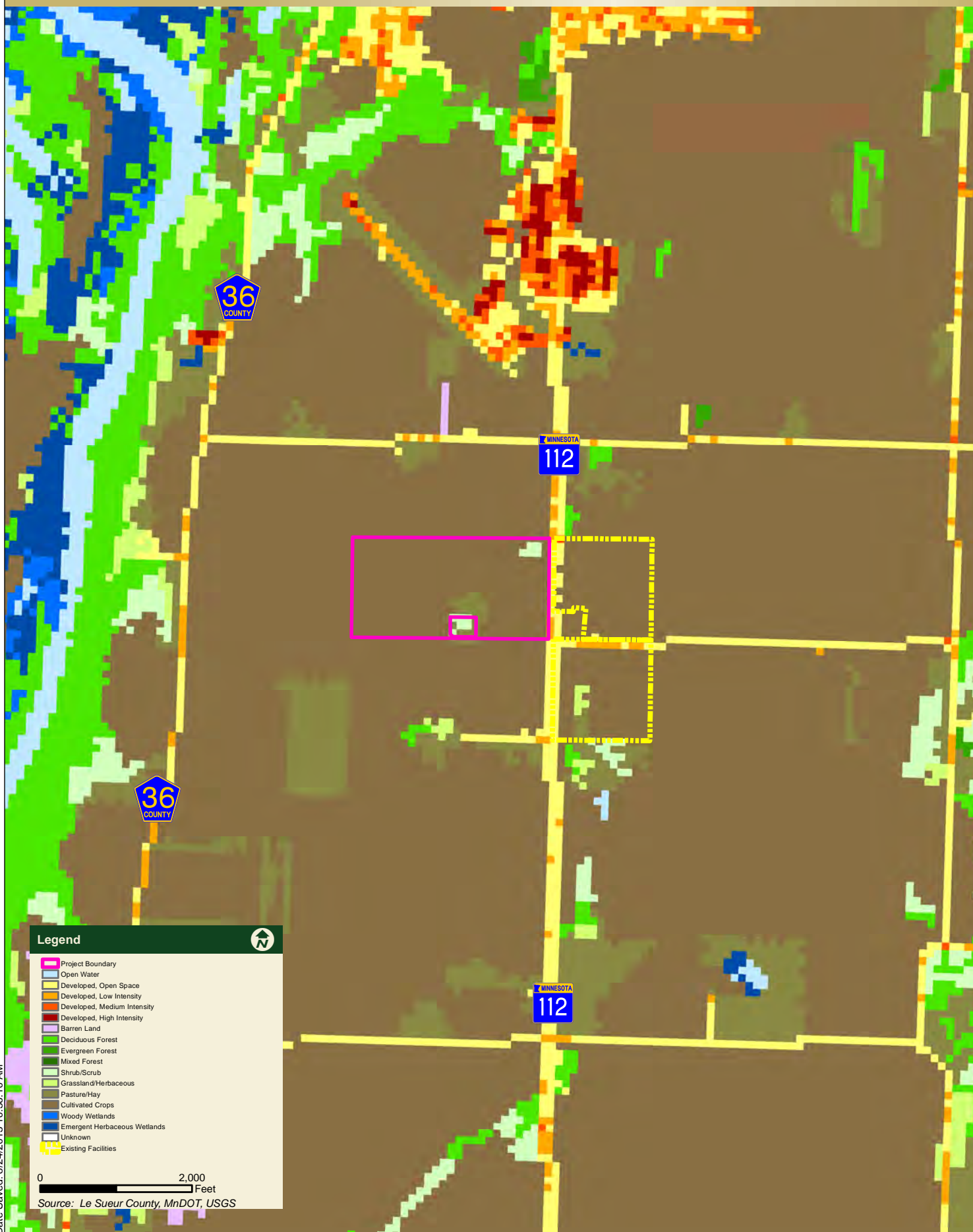
**City**

Scale: 1 inch = 4,000 feet

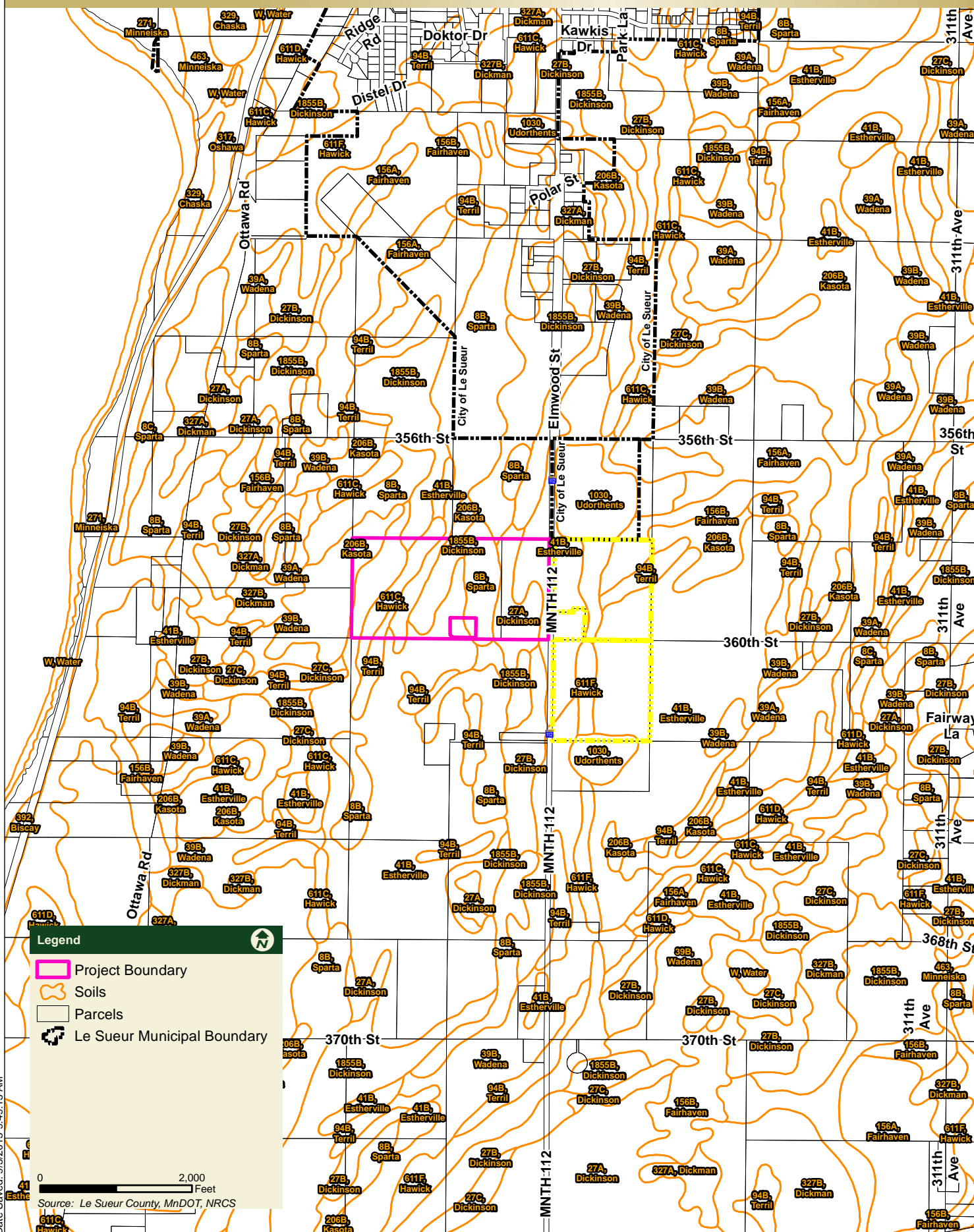
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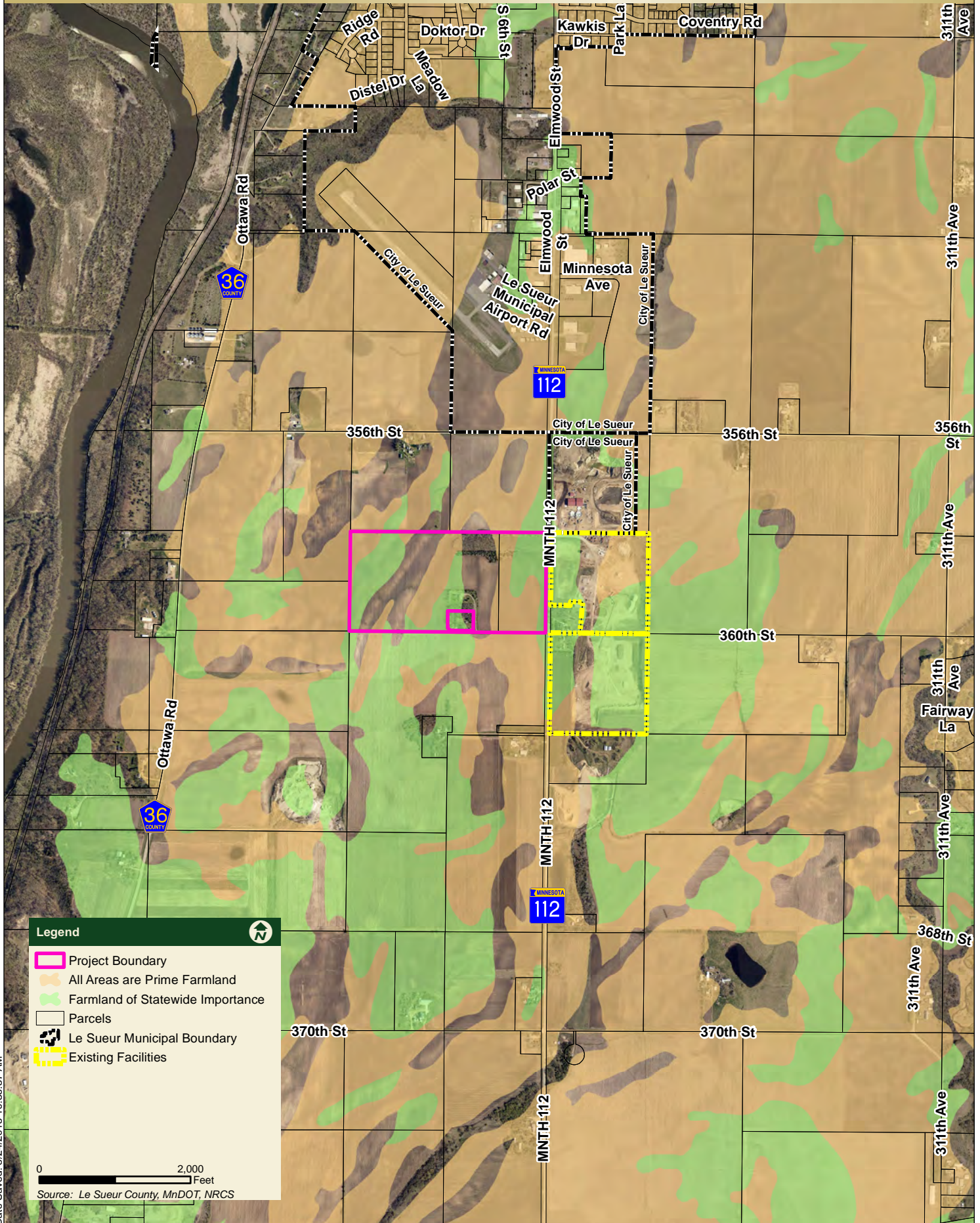




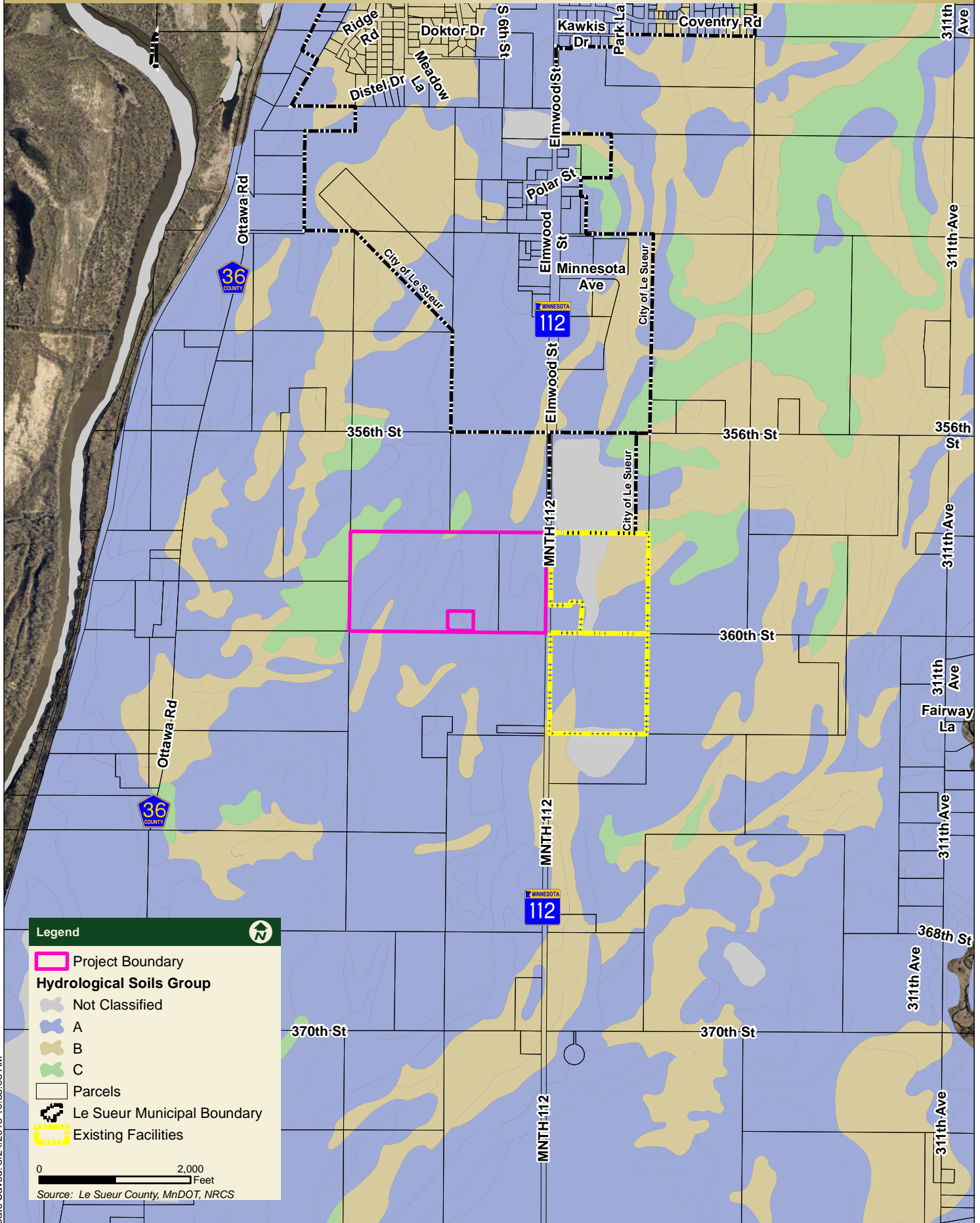
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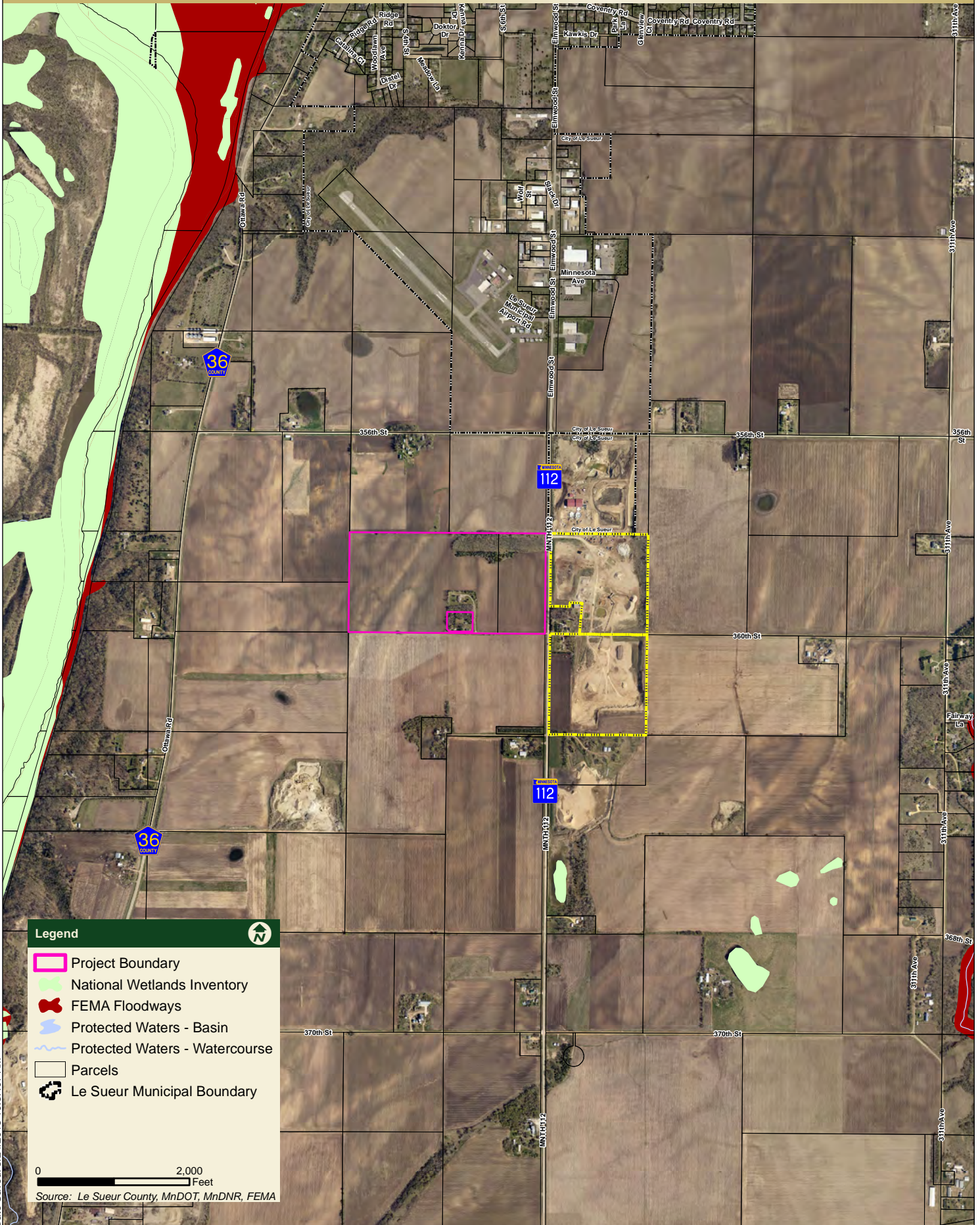






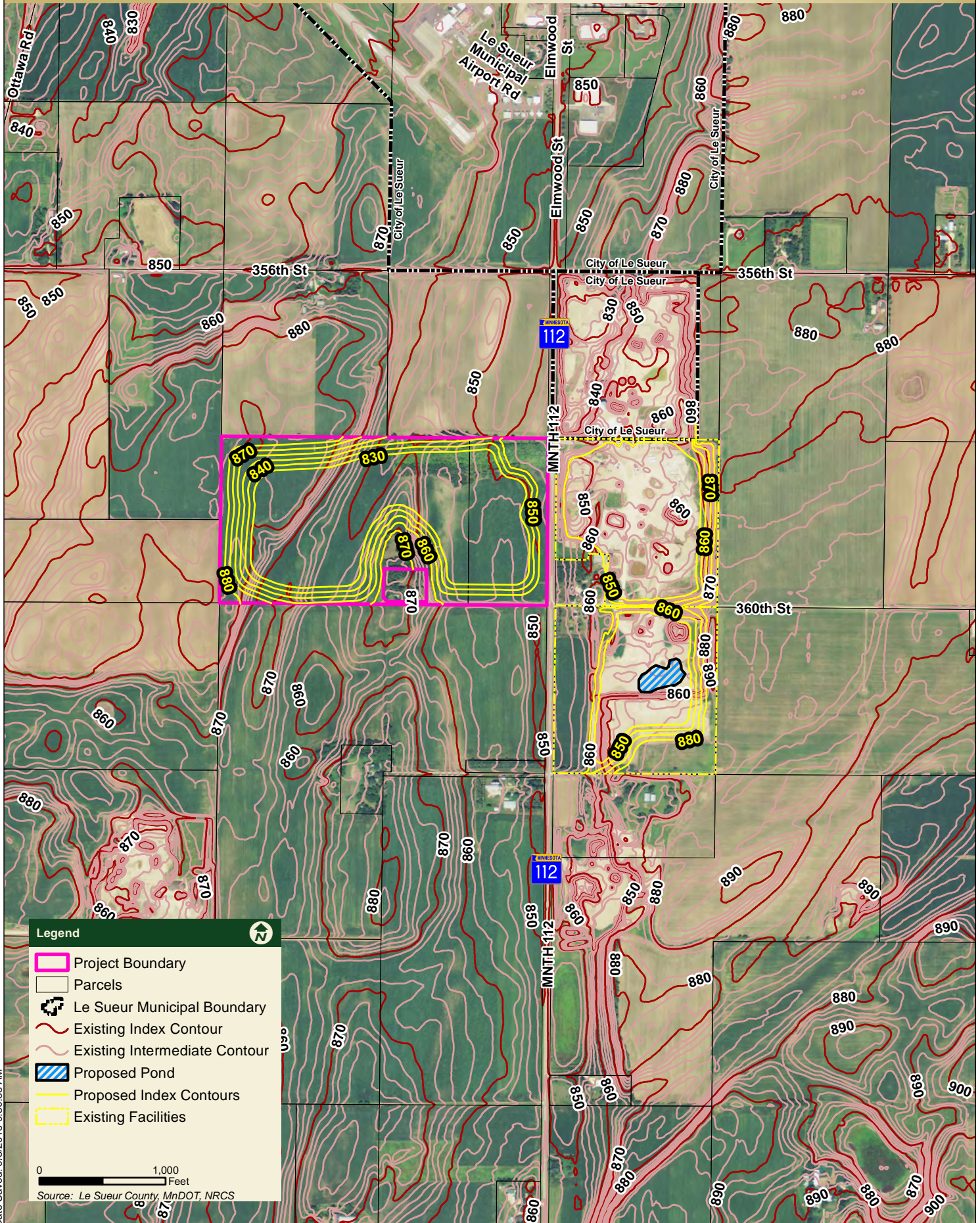






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## **Appendix**

### **Traxler Construction, Inc. Gravel Mine Reclamation Plan**

This Reclamation Plan is based on current assumptions for business level and market conditions, as well as the assumption that this is the final mine area. Business levels and market conditions are likely to fluctuate affecting both the timing, as well as the amount of material available for backfill. In addition, review by other agencies is expected as part of securing all necessary permits for the area, and changes may also be recommended by those agencies. Any significant modifications to this Reclamation Plan will be presented to County staff for review. This Reclamation Plan now includes the reclamation of the existing mine because the overburden from the proposed mine will be used to reclaim the existing mine.

### **Stripping, Mining, and Backfilling Processes**

The actual mining operation will be a continuous and highly integrated process. The total acreage of parcels with existing and proposed mining and processing activities is 152.92 acres. The expansion site will encompass 78 acres, of which approximately 50 acres will be mined. The project is estimated at this time to last approximately 20 years. The life of the mining operation will be determined by the market demand and will be subject to changing conditions. The anticipated rate of mining is 5 acres a year at 10 feet deep or 3 acres a year at 18-20 feet deep.

Existing Mining/Processing Operations - The Proposer will continue mining and processing on the existing parcels, and is intending to use a backhoe to mine deeper into the floor of the existing mine, potentially into the water table 10-15 feet.

Expansion Phase 1 – starting in 2016 – Mining in parcel 10.011.5100 will begin in the southeast corner stripping of black dirt, mining of aggregate of approximately 10 acres for a time period of 1.5 years. The crushing and screening plants are portable and will be operated on the new expansion parcels and the material will be conveyed under the highway and washed at the existing processing area.

Expansion Phase 2 – The Proposer would reclaim the southeast corner of parcel and begin mining the northeast corner for approximately 1.5 years. This process will continue working west in 10 acre parcels with reclamation being done at the same time until property is fully mined.

It is important to note that while an area is being mined, other mining related activities such as backfill, reclamation, overburden removal, and ongoing reclamation will also be ongoing concurrently in order to maintain a continuous mining operation.

The anticipated average depth of the mine will be 20 feet, becoming less as it goes further west. The mining involves the removal of overburden to expose the gravel. Traxler Construction, Inc. will strip black dirt and clay from the top of the aggregate base to be mined. The estimated depth of overburden (stockpiled as screening berms and for use in the final reclamation process) is 1 to 2 feet of black dirt (topsoil) and 1 to 2 feet of clay. Both the overburden and the gravel material will be removed by the mobile mining equipment. The overburden will be moved internally within the overall mining areas and used to construct berms and to complete reclamation of the existing mining areas, or it will be stored for later use in reclamation. No topsoil will leave the Project site.

### **Fill and Soil**

The mining involves the removal of the overburden to expose the gravel. The overburden consists of topsoil and glacial till. The topsoil will be removed and used to construct screening berms or stockpiled to be used later as a part of final site reclamation. The removal of the glacial till and mining of the gravel will be accomplished with mobile earth moving equipment. No blasting is anticipated. The glacial till will

be moved internally within the overall mining areas and used for backfilling areas where the gravel has already been removed for processing, allowing for reclamation to proceed concurrently with mining.

Reclamation activities include the use of heavy construction equipment to backfill the excavation and replace topsoil and large agricultural machinery to seed the area with native plantings. Once the mining has been completed, the resulting mixture of subsoil will be homogenous with similar characteristics of the original soils. Soil tests will be conducted to determine the optimum plant selection for the site and what, if any, soil amendments need to be used to add nutrients or adjust pH. A soil pH of 5.4 to 7.0 is optimal. Topsoil will be respread on the site to a minimum depth of approximately 4 inches. No topsoil will be removed from the Project area.

Reclamation activities will be ongoing as mining is completed in an area. Graded or backfilled areas or banks shall be covered with sufficient topsoil, based on the availability of existing topsoil, to provide for revegetation. Where back-sloping exists, rate of the slopes shall not be less than four (4) feet horizontal to one (1) foot vertical. Banks shall be covered with available topsoil and seeded.

Traxler Construction, Inc. will keep and stockpile whatever topsoil and clay material it can from the top of the surface; keeping this material for reclamation. Clean topsoil and clay may be brought in from construction projects and used in reclamation. Back sloping will be done as material is removed; this sloping will be done with filling using sand, clay, and other available topsoil materials. Backfilled slopes will be replanted with native grasses and forbs as listed in the Vegetation and Planting section below.

Some of the 4:1 perimeter slopes of the existing mine have been backfilled and reclaimed. The floor of the existing mining and processing parcels is currently open to allow for processing and stockpiling activities. The floor is planned to remain without topsoil or vegetation as part of reclamation since it will eventually be developed into outdoor storage or a building site of some type. The proposed reclamation grades are shown on the Reclamation Plan Map for both the proposed and the existing parcel. The proposed waterbody the Proposer is intending to create on the currently mined southern parcel is also shown.

Traxler Construction, Inc. will be using the floor of the pit to store material as it is made, so that the active working area will be over 10 acres. As a large enough floor is created from the mining activity, reclamation will progress on the floor of the pit as well as the 4:1 perimeter slope. Reclamation will be the process of spreading out the available topsoil materials on the pit floor and seeding it with the recommended grasses and native vegetation.

### **Erosion Control Plan**

Traxler Construction, Inc. will implement Best Management Practices (BMPs) to prevent contributing to the Minnesota River's impairment for turbidity. One such BMP is the native plantings that will help prevent erosion and sedimentation, and will evapotranspire some of the water.

A summary of other BMPs proposed to address the erosion problems during and after mining include but are not limited to:

- Timely field reconnaissance inspections during surface restoration activities.
- Utilizing applicable BMPs such as fiber rolls and silt fence.
- Filling all erosion channels with topsoil, then reseeding the restored surface.
- Applying appropriate mulch or erosion control fabric to control rill development.
- Placing rock at appropriate culvert inlets and outlets.
- Constructing rock check dams on steep slopes as needed.

### **Topography**

It is anticipated that the general surface contours of the Project site will be similar to the existing contours. A landscape of undulating upland and lowland areas will be created, in order to provide different habitats for plants and animals. Isolated depressions will be created. The slopes shall not be steeper than 4 feet horizontal to 1 foot vertical, to provide a stable and safe condition.

### **End Use of Site**

It is proposed to reclaim the site as an oak savanna consisting of native grasses, wildflowers (forbs), shrubs and deciduous hardwood species, especially bur oak and northern pin oak. The sandy, well drained soils are well suited for this proposed end use. The result will be wildlife habitat. Vegetation will be chosen at the time of planting on the reclaimed areas; projected plant seed mixes are included herein. In addition, various other habitat enhancements such as food plots, brush piles, and artificial nesting structures will be used to encourage the development of wildlife populations. No mining-related structures or processing plants will be on the Project area during mining, and therefore will not need to be removed during reclamation.

### **Stormwater**

Reclamation will be conducted in a manner that is protective of the minor watershed's water quantity and quality issues. A small waterbody is proposed on the currently mined southern parcel. Small isolated depressions will be created on the proposed expansion area that will collect stormwater runoff from the nearby area; these will act like infiltration basins. The basins will give stored water time to infiltrate, recharging water into the underlying aquifers as the soils on site have done in the past. The site will be dry the majority of the time.

Even assuming no upstream infiltration, through the use of infiltration, as well as the various proposed improvements, this Project will not exacerbate any existing Minnesota River impairments or result in any further degradation or adverse impacts to existing water bodies in this vicinity.

### **Wetlands**

No National Wetlands Inventory wetlands are on the Project site.

### **Roads**

The proposed mine will require the temporary closing of Highway 112 for a culvert to be constructed, but otherwise will not result in relocating any roads.

### **Vegetation and Planting**

#### **Planting**

The vegetated berms will be a mixture of trees, shrubs and tall grasses to provide adequate screening. In addition, planting diversity in tree species will help prevent significant impacts from disease or insects. Grass and forb seed planting rates of 84.5 lbs/acre (includes cover crop) with a 10-10-20 fertilizer at 400 lbs/acre (dependent on soil testing to determine proper amount of soil amendments) and MNDOT Type 3 mulch at 2 tons/acre are recommended (based on MNDOT District Seeding Recommendations).

#### **Plants for Lowland Sites**

Use State Seed Mixes 35-241 Mesic Prairie General or 36-211 Woodland Edge South & West.

#### **Shrubs**

Cornus sericea - Red Osier Dogwood

Cephalanthus occidentalis - Buttonbush

Shrubs should be planted at least 6 feet apart on center.

### Plants for Upland Sites

Use State Seed Mixes 32-241 Native Construction, 36-211 Woodland Edge South & West, or 35-221 Dry Prairie General.

#### Shrubs

Amelanchier alnifolia - Serviceberry

Cornus sericea - Red Osier Dogwood

Cornus racemosa – Gray Dogwood

Shrubs should be planted at least 6 feet apart on center.

#### Trees

Quercus ellipsoidalis - Northern Pin Oak

Quercus macrocarpa - Bur Oak

All trees should be planted at least 50 feet apart on center.

### **Vegetation Management**

When establishing vegetation in an area, controlling noxious weeds and monitoring successful establishment of vegetation is very important. Noxious weeds in Minnesota include: hemp (annual); bull thistle, garlic mustard, musk thistle, and plumeless thistle (biennial); Canada thistle, perennial sowthistle, leafy spurge, field bindweed, poison ivy, and purple loosestrife (perennial).

Chemical control of annual weeds works best when an herbicide is applied in the spring to actively growing, young weeds. Mechanical control, such as mowing, is also effective against annuals. Control of biennials, via herbicides, are most effective when applied during the first year's growth. If treatment is delayed until the second year, early season application of an herbicide, or mowing, before bloom is recommended.

The best methods of perennial weed management in a perennial prairie ecosystem are mechanical (mowing) or chemical (herbicides). Fall herbicide applications can provide some of the best perennial weed control during the season. However, it is important to realize that herbicides alone, or one herbicide application will generally not eradicate a perennial weed population. Application of herbicides in spring, or frequent mowing during the summer is also effective in controlling growth till fall. However, mowing alone may take several growing seasons to effectively control perennial weed populations.

Prescribed burning is another method of perennial weed management. A prescribed burn will be conducted starting the third year after planting, as described in the maintenance section herein.

### **Inspections and Maintenance**

The Project Proposer will inspect the plantings at least annually to evaluate planting success. Trees and shrubs lost to mortality will be replanted within the same year inspected. Areas where grass and forb seeding was not successful will be replanted within one month of inspection (depending on contractor availability). The Project Proposer will contract with a company specializing in native plant seeding and maintenance to provide assistance for the establishment of the plantings described within this plan.

The Project Proposer will inspect the site on a weekly basis after construction until vegetation has become established to identify erosion problems. Areas of erosion will be corrected and reseeded within one week.



The DNR publication “Going Native: A Prairie Restoration Handbook for Minnesota Landowners” (<http://files.dnr.state.mn.us/assistance/backyard/prairierestoration/goingnative.pdf>) has a helpful year by year expectation and maintenance outline. This has been summarized here.

#### Year One Expectations

The prairie won’t look like much after the first growing season. Prairie plants will probably only have one or two small leaves above ground. The site will look messy, and annual weeds may still be present.

#### Year One Maintenance

During the planting year, annual weeds will be controlled by mowing. Prairie seedlings will be putting most of their energy into their roots in the first year, and won’t get very tall. For the first mowing, the mower will be set to cut higher than the seedlings, usually four to five inches. The weeds will not be allowed to get higher than six to eight inches tall, which usually requires mowing an additional two to three times in a season. Mowing will continue until late September. A mulching or flail mower will be used so that it is less likely to smother the small prairie plants with grass clippings. Alternatively, thick cuttings left after mowing should be removed or raked off. The weeds will not be allowed to go to seed. This can happen very quickly, especially when there’s been a lot of rain. The site will be monitored frequently during the first year’s growing season (approximately monthly). Weeds or invading tree seedlings will not be pulled in the first year, to prevent pulling up or damaging native seedlings in the process.

#### Year Two Expectations

Short-lived prairie perennials like wild bergamot will become established, and might even bloom. Annual weeds should be nearly gone. Black-eyed Susan is reseeding itself profusely.

#### Year Two Maintenance

The site will be mowed to six to eight inches in the spring as soon as weeds begin to grow. Efforts will be made not to disturb the soil, which can encourage weed seed germination. If the cuttings are heavy and thick, they will be raked off. Mowing will be limited in the second growing season to one or two times, no shorter than eight inches and only if needed to control weeds. The mowing will be timed before the weeds flower. Sweet clover will be pulled or mowed the second year before it flowers. It will not be allowed to go to seed. Sweet clover seeds are stimulated to germinate by fire, and can be a long-term problem. If necessary, spot applications of glyphosate will be used, being careful not to kill nearby native seedlings, or weeds will be pulled manually to control them. The site will be monitored for noxious weeds such as non-native grasses, leafy spurge, Canada thistle, spotted knapweed, mullein, curly dock, wild parsnip, and burdock, which can invade quickly. These will be spot-sprayed, as discussed in the Vegetation Management section above.

#### Year Three Expectations

Short-lived prairie perennials like black-eyed Susan, so prolific in the first few years, will be joined by other grasses and forbs. Long-lived native perennials like big bluestem, little bluestem, switchgrass, Indian grass, side-oats grama and rattlesnake master will become established. Purple coneflower, compass plant, and white and purple prairie clover will begin to flower.

#### Year Three Maintenance

A prescribed burn will be conducted starting the third year if there is enough plant litter to provide fuel for the fire. The area to be burned will be mowed before the burn to lower flame height and create a safer, more subdued burn. Areas that don’t have a good growth of native plants after the burn will be interseeded.

#### Year Four and Beyond Expectations

More conservative species like prairie dropseed, prairie cinquefoil, New Jersey tea, wild indigo, and Culver's root will start to hold their own after about six years. Some prairie plants might take as long as 10 years or more to bloom.

#### Year Four and Beyond Long-Term Maintenance

Management techniques such as rotationally burning, or mowing and raking will be continued each year. Fertilizing will only occur if the site is mowed regularly, being careful not to favor weeds. In order to maintain or increase species diversity, areas where the vegetation is not thriving will be interseeded or planted with seedlings. Weeds will be regularly monitored, especially in areas that have been disturbed, and they will be eliminated before they become a widespread problem. There should not be a need to water the site.

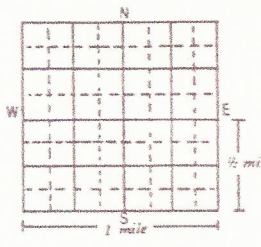
#### Vertical Profile of the Reclaimed Area



Minimum depth of the restored topsoil = 4 inches (ranges up to 18 inches)

Depth of imported clean clay material (optional) = up to 12 inches

Depth of graded in-situ/un-mined material = varies

WELL LOCATION					MINNESOTA DEPARTMENT OF HEALTH <b>WELL RECORD</b> <i>Minnesota Statutes Chapter 103I</i>		MINNESOTA UNIQUE WELL NO.	
County Name <u>Le Sueur</u>								
Township Name	Township No.	Range No.	Section No.	Fraction	WELL DEPTH (completed) <u>194</u> ft.	Date of Completion <u>7-8-82</u>		
Numerical Street Address or Fire Number and City of Well Location					DRILLING METHOD <input type="checkbox"/> Cable Tool <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Auger <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Jetted			
Show exact location of well in section grid with "X". 					Sketch map of well location. Showing property lines, roads and buildings.			
PROPERTY OWNER'S NAME <u>Traxler Construction</u> Mailing address if different than property address indicated above.					DRILLING FLUID <u>Water</u>			
USE <input type="checkbox"/> Domestic <input type="checkbox"/> Monitoring <input type="checkbox"/> Heating-Cooling <input type="checkbox"/> Irrigation <input type="checkbox"/> Public <input type="checkbox"/> Industry/Commercial <input checked="" type="checkbox"/> Test Well <input type="checkbox"/> Dewatering					CASING      Drive Shoe? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Welded <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> _____			
CASING DIAMETER      WEIGHT <u>6</u> in. to <u>194</u> ft. <u>200psi</u> lbs./ft.					HOLE DIAM. _____ in. to _____ ft.			
SCREEN Make <u>Johnson</u> Type <u>Stainless</u> Slot/Gauze <u>018 - 015</u> Set between <u>184</u> ft. and <u>194</u> ft.					OPEN HOLE from _____ ft. to _____ ft. Length _____ FITTINGS: <u>one 1/2" pipe</u>			
FORMATION LOG      COLOR      HARDNESS OF FORMATION      FROM      TO					STATIC WATER LEVEL <u>94</u> ft. below <input type="checkbox"/> above land surface      Date measured <u>7-8-82</u>			
<u>Fill</u> <u>soft</u> <u>0</u> <u>8</u>					PUMPING LEVEL (below land surface) <u>106</u> ft. after <u>2</u> hrs. pumping <u>40</u> g.p.m.			
<u>Gravel</u> <u>Yellow</u> <u>soft</u> <u>8</u> <u>32</u>					WELL HEAD COMPLETION <input type="checkbox"/> Pitless adapter manufacturer _____ Model _____ <input checked="" type="checkbox"/> Casing Protection <u>steel casing</u>			
<u>Clay</u> <u>Yellow</u> <u>soft</u> <u>32</u> <u>58</u>					GROUTING INFORMATION Well grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Grout Material <input type="checkbox"/> Neat cement <input checked="" type="checkbox"/> Bentonite from <u>60</u> to <u>0</u> ft.      _____ yds. _____ bags from _____ to _____ ft.      _____ yds. _____ bags from _____ to _____ ft.      _____ yds. _____ bags			
<u>Clay</u> <u>Gray</u> <u>soft</u> <u>58</u> <u>121</u>					NEAREST SOURCE OF POSSIBLE CONTAMINATION _____ feet      _____ direction      _____ type			
<u>Clay Sand layers</u> <u>Gray</u> <u>soft</u> <u>121</u> <u>130</u>					Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<u>Sand</u> <u>Yellow</u> <u>soft</u> <u>130</u> <u>194</u>					PUMP <input type="checkbox"/> Not installed      Date installed _____ Manufacturer's name <u>Grundfos</u> Model number _____ HP <u>5</u> Volts <u>230</u> Length of drop pipe <u>168</u> ft. Capacity <u>65</u> g.p.m. Pressure Tank Capacity _____ Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> L.S. Turbine <input type="checkbox"/> Reciprocating <input type="checkbox"/> Jet			
					ABANDONED WELLS Not in use and not sealed well on property? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
					WELL CONTRACTOR CERTIFICATION This well was drilled under my jurisdiction and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.			
REMARKS, ELEVATION, SOURCE OF DATA, etc.					Licensee Business Name _____ Lic. or Reg. No. _____ Authorized Representative Signature _____ Date _____ Name of Driller _____ Date _____			
Use a second sheet, if needed					HE-01205-03 (Rev. 9/91)			

**WORK COPY**

Minnesota Unique Well No.		County Le Sueur		<b>MINNESOTA DEPARTMENT OF HEALTH</b> <b>WELL AND BORING</b> <b>RECORD</b> <i>Minnesota Statutes Chapter 103I</i>		Entry Date 04/11/1988	
129228		Quad Le Sueur				Update Date 08/18/2014	
		Quad ID 74B				Received Date	

<b>Well Name</b> BAULEKE, FLOYD <b>Township Range Dir Section Subsections Elevation</b> 885 ft. 111 26 W 13 ABBCCA <b>Elevation Method</b> 7.5 minute topographic map (+/- 5 feet)				<b>Well Depth</b> 550 ft. <b>Depth Completed</b> 550 ft. <b>Date Well Completed</b> 09/17/1976																																														
				<b>Drilling Method</b> Cable Tool																																														
<table style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Geological Material</th> <th style="text-align: left;">Color</th> <th style="text-align: left;">Hardness</th> <th style="text-align: left;">From</th> <th style="text-align: left;">To</th> </tr> <tr><td>CLAY</td><td>YEL/GRY</td><td>SOFT</td><td>0</td><td>40</td></tr> <tr><td>SAND COURSE</td><td>BROWN</td><td>SOFT</td><td>40</td><td>50</td></tr> <tr><td>CLAY</td><td>GRAY</td><td>SOFT</td><td>50</td><td>155</td></tr> <tr><td>LIMESTONE</td><td>YELLOW</td><td>MEDIUM</td><td>155</td><td>190</td></tr> <tr><td>SANDROCK</td><td>YELLOW</td><td>MEDIUM</td><td>190</td><td>275</td></tr> <tr><td>LIMESTONE (SANDY)</td><td>RED</td><td>MEDIUM</td><td>275</td><td>400</td></tr> <tr><td>SHALE (SANDY)</td><td>GREEN</td><td>MEDIUM</td><td>400</td><td>440</td></tr> <tr><td>SANDSTONE</td><td>WHITE</td><td>SOFT</td><td>440</td><td>550</td></tr> </table>				Geological Material	Color	Hardness	From	To	CLAY	YEL/GRY	SOFT	0	40	SAND COURSE	BROWN	SOFT	40	50	CLAY	GRAY	SOFT	50	155	LIMESTONE	YELLOW	MEDIUM	155	190	SANDROCK	YELLOW	MEDIUM	190	275	LIMESTONE (SANDY)	RED	MEDIUM	275	400	SHALE (SANDY)	GREEN	MEDIUM	400	440	SANDSTONE	WHITE	SOFT	440	550	<b>Drilling Fluid</b> -- <b>Well Hydrofractured?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No From Ft. to Ft.	
				Geological Material	Color	Hardness	From	To																																										
				CLAY	YEL/GRY	SOFT	0	40																																										
				SAND COURSE	BROWN	SOFT	40	50																																										
				CLAY	GRAY	SOFT	50	155																																										
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				SANDROCK	YELLOW	MEDIUM	190	275																																										
				LIMESTONE (SANDY)	RED	MEDIUM	275	400																																										
				SHALE (SANDY)	GREEN	MEDIUM	400	440																																										
				SANDSTONE	WHITE	SOFT	440	550																																										
<b>Use</b> Irrigation																																																		
<b>Casing Type</b> <b>Joint</b> Welded <b>Drive Shoe?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>Above/Below</b> 1 ft.																																																		
<table style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Casing Diameter</th> <th style="text-align: left;">Weight</th> <th style="text-align: left;">Hole Diameter</th> </tr> <tr> <td>16 in. to 163 ft.</td> <td>62.58 lbs./ft.</td> <td></td> </tr> <tr> <td>12 in. to 188 ft.</td> <td>lbs./ft.</td> <td></td> </tr> </table>		Casing Diameter	Weight	Hole Diameter	16 in. to 163 ft.	62.58 lbs./ft.		12 in. to 188 ft.	lbs./ft.																																									
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16 in. to 163 ft.	62.58 lbs./ft.																																																	
12 in. to 188 ft.	lbs./ft.																																																	
<b>Open Hole</b> from 188 ft. to 550 ft.																																																		
<table style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Screen NO</th> <th style="text-align: left;">Make</th> <th style="text-align: left;">Type</th> </tr> <tr> <td colspan="3" style="height: 100px;"> </td> </tr> </table>		Screen NO	Make	Type																																														
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<table style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Diameter</th> <th style="text-align: left;">Slot/Gauze</th> <th style="text-align: left;">Length</th> <th style="text-align: left;">Set Between</th> </tr> <tr> <td colspan="4" style="height: 100px;"> </td> </tr> </table>		Diameter	Slot/Gauze	Length	Set Between																																													
Diameter	Slot/Gauze	Length	Set Between																																															
<b>Static Water Level</b> 116 ft. from Land surface    Date Measured 09/17/1976																																																		
<b>PUMPING LEVEL (below land surface)</b> 150 ft. after 24 hrs. pumping 580 g.p.m.																																																		
<b>Well Head Completion</b> Pitless adapter manufacturer    Model <input type="checkbox"/> Casing Protection <input checked="" type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)																																																		
<b>REMARKS</b> CASING: 016 TO 0163;012 TO 0188. CASING: 016 TO 0163;012 TO 0188;																																																		
<b>Located by:</b> Minnesota Geological Survey <b>Method:</b> Digitized - scale 1:24,000 or larger (Digitizing Table)																																																		
<b>Unique Number Verification:</b> N/A <b>Input Date:</b> 01/01/1990																																																		
<b>System:</b> UTM - Nad83, Zone15, <b>X:</b> 428473 <b>Y:</b> 4919623 Meters																																																		
<b>Grouting Information</b> Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Specified																																																		
<b>Nearest Known Source of Contamination</b> 1020 feet E direction Barnyard type Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																																																		
<b>Pump</b> <input type="checkbox"/> Not Installed    Date Installed Manufacturer's name    Model number    HP 0    Volts Length of drop Pipe    ft.    Capacity    g.p.m.    Type    Material																																																		
<b>Abandoned Wells</b> Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No																																																		
<b>Variance</b> Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No																																																		
<b>Well Contractor Certification</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Hydro Engineering</td> <td style="text-align: center;">10318</td> <td style="text-align: center;">KLOECKL, J.</td> </tr> <tr> <td style="text-align: center;">License Business Name</td> <td style="text-align: center;">Lic. Or Reg. No.</td> <td style="text-align: center;">Name of Driller</td> </tr> </table>				Hydro Engineering	10318	KLOECKL, J.	License Business Name	Lic. Or Reg. No.	Name of Driller																																									
Hydro Engineering	10318	KLOECKL, J.																																																
License Business Name	Lic. Or Reg. No.	Name of Driller																																																
<b>First Bedrock</b> Prairie Du Chien Group <b>Aquifer</b> Multiple <b>Last Strat</b> Wonewoc Sandstone <b>Depth to Bedrock</b> 155 ft.																																																		
County Well Index Online Report		129228		Printed 1/5/2015 HE-01205-07																																														

Minnesota Unique Well No.		County Le Sueur		<b>MINNESOTA DEPARTMENT OF HEALTH</b> <b>WELL AND BORING</b> <b>RECORD</b> Minnesota Statutes Chapter 103I		Entry Date 07/13/1992	
161349		Quad Le Sueur 74B				Update Date 02/14/2014	
		Quad ID 74B				Received Date	

<b>Well Name</b> DENGEL, ERNIE <b>Township Range Dir Section Subsections Elevation</b> 111 26 W 13 BCBADC <b>Elevation Method</b> 872 ft. 7.5 minute topographic map (+/- 5 feet)				<b>Well Depth</b> 173 ft. <b>Depth Completed</b> 173 ft. <b>Date Well Completed</b> 09/00/1986									
				<b>Drilling Method</b> Non-specified Rotary									
<b>Geological Material</b> GRAVEL BROWN HARD 0 28 SAND BROWN MEDIUM 28 89 CLAY BLUE MEDIUM 89 148 SAND FINE GRAY MEDIUM 148 158 SAND GRAY MEDIUM 158 173				<b>Drilling Fluid</b> -- <b>Well Hydrofractured?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No From Ft. to Ft.									
				<b>Use</b> Domestic									
				<b>Casing Type</b> Steel (black or low carbon) <b>Joint</b> Threaded <b>Drive Shoe?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Above/Below 1 ft.									
				<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Casing Diameter</th> <th style="text-align: left;">Weight</th> <th style="text-align: left;">Hole Diameter</th> </tr> <tr> <td>5 in. to 169 ft.</td> <td>15 lbs./ft.</td> <td></td> </tr> </table>		Casing Diameter	Weight	Hole Diameter	5 in. to 169 ft.	15 lbs./ft.			
				Casing Diameter	Weight	Hole Diameter							
				5 in. to 169 ft.	15 lbs./ft.								
				<b>Open Hole</b> from ft. to ft.									
				<b>Screen</b> YES <b>Make</b> JOHNSON <b>Type</b> stainless steel									
				<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Diameter</th> <th style="text-align: left;">Slot/Gauze</th> <th style="text-align: left;">Length</th> <th style="text-align: left;">Set Between</th> </tr> <tr> <td>4</td> <td>10</td> <td>4</td> <td>169 ft. and 173 ft.</td> </tr> </table>		Diameter	Slot/Gauze	Length	Set Between	4	10	4	169 ft. and 173 ft.
				Diameter	Slot/Gauze	Length	Set Between						
4	10	4	169 ft. and 173 ft.										
<b>Static Water Level</b> 95 ft. from Land surface    Date Measured 09/00/1986													
<b>PUMPING LEVEL (below land surface)</b> 102 ft. after 1 hrs. pumping 35 g.p.m.													
<b>Well Head Completion</b> Pitless adapter manufacturer YES    Model <input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)													
NO REMARKS				<b>Grouting Information</b> Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified  Grout Material: Bentonite    from 0 to ft. 0									
<b>Located by:</b> Minnesota Geological Survey <b>Method:</b> Digitized - scale 1:24,000 or larger (Digitizing Table) <b>Unique Number Verification:</b> Information from owner <b>Input Date:</b> 01/01/1990 <b>System:</b> UTM - Nad83, Zone15, Meters <b>X:</b> 427792 <b>Y:</b> 4919311				<b>Nearest Known Source of Contamination</b> 105 feet South West direction    Septic tank/drain field type Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
				<b>Pump</b> <input checked="" type="checkbox"/> Not Installed    Date Installed Manufacturer's name MEYERS    Model number    HP 0.75    Volts 220 Length of drop Pipe 126 ft.    Capacity 15 g.p.m. Type Submersible    Material Galvanized									
				<b>Abandoned Wells</b> Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No									
				<b>Variance</b> Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No									
<b>First Bedrock</b> <b>Aquifer</b> Quat. Buried Artes. Aquifer <b>Last Strat</b> sand-gray <b>Depth to Bedrock</b> ft.				<b>Well Contractor Certification</b> Geib Well Co.    72027    GEIB, D. License Business Name    Lic. Or Reg. No.    Name of Driller									
County Well Index Online Report				161349		Printed 1/5/2015 HE-01205-07							

Minnesota Unique Well No.		County Le Sueur		Quad Le Sueur		Quad ID 74B		<b>MINNESOTA DEPARTMENT OF HEALTH</b> <b>WELL AND BORING</b> <b>RECORD</b> Minnesota Statutes Chapter 103I			Entry Date 04/11/1988 Update Date 06/02/2014 Received Date	
129234												
<b>Well Name</b> MOSER, MERLE <b>Township Range Dir Section Subsections Elevation</b> 111    26    W    14    ADACDB <b>Elevation Method</b>						<b>Well Depth</b> 242 ft.		<b>Depth Completed</b> 242 ft.		<b>Date Well Completed</b> 10/18/1976		
						<b>Drilling Method</b> Cable Tool						
<b>Geological Material</b> TOP SOIL                      GRAY    SOFT    0    2 CLAY                            YELLOW    SOFT    2    30 CLAY                            GRAY    SOFT    30    70 CLAY                            BLUE    SOFT    70    85 COARSE SAND                GRAY    SOFT    85    100 CLAY                            GRAY    SOFT    100    120 CLAY                            BLUE    SOFT    120    140 MEDIUM SAND              GRAY    SOFT    140    150 CLAY                            GRAY    SOFT    150    170 CLAY                            GRAY    SOFT    170    182 SANDROCK & GRAVEL & LIMEROCK    RED    MEDIUM    182    220 GRAVEL & LIMEROCK        RED    MEDIUM    220    240 SANDROCK                    PINK    MEDIUM    240    242						<b>Drilling Fluid</b> --		<b>Well Hydrofractured?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No From Ft. to Ft.				
						<b>Use</b> Irrigation						
						<b>Casing Type</b> <b>Joint</b> Welded <b>Drive Shoe?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>Above/Below</b> 1 ft.						
						<b>Casing Diameter</b> 16 in. to		<b>Weight</b> 212 ft.		<b>Hole Diameter</b> 62.58 lbs./ft.		
						<b>Open Hole</b> from ft. to ft.						
						<b>Screen</b> YES <b>Make</b> JOHNSON <b>Type</b> punched pipe						
						<b>Diameter</b> 0		<b>Slot/Gauze</b> 50		<b>Length</b> 30		
								<b>Set Between</b> 212 ft. and		242 ft.		
						<b>Static Water Level</b> 84 ft. from Land surface    Date Measured    10/18/1976						
						<b>PUMPING LEVEL (below land surface)</b> 122 ft. after 10 hrs. pumping 692 g.p.m.						
<b>Well Head Completion</b> Pitless adapter manufacturer    Model <input type="checkbox"/> Casing Protection <input checked="" type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)												
NO REMARKS						<b>Grouting Information</b> Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified						
<b>Located by:</b> United States Geological Survey <b>Method:</b> Digitized - scale 1:24,000 or larger (Digitizing Table) <b>Unique Number Verification:</b> N/A <b>Input Date:</b> 01/01/1990 <b>System:</b> UTM - Nad83, Zone15, Meters <b>X:</b> 427498 <b>Y:</b> 4919222						<b>Nearest Known Source of Contamination</b> 300 feet    S direction    Feedlot type						
						Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
						<b>Pump</b> <input type="checkbox"/> Not Installed    Date Installed Manufacturer's name    Model number    HP 0    Volts Length of drop Pipe    ft.    Capacity    g.p.m.    Type    Material						
<b>First Bedrock</b> Jordan Sandstone <b>Aquifer</b> Quat. Buried Artes. Aquifer <b>Last Strat</b> Jordan Sandstone <b>Depth to Bedrock</b> 240 ft.						<b>Abandoned Wells</b> Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No						
						<b>Variance</b> Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No						
						<b>Well Contractor Certification</b> Hydro Engineering    10318    KLOECKL, J. License Business Name    Lic. Or Reg. No.    Name of Driller						
County Well Index Online Report						129234		Printed 1/5/2015 HE-01205-07				



Minnesota Unique Well No.		County Le Sueur		<b>MINNESOTA DEPARTMENT OF HEALTH</b> <b>WELL AND BORING</b> <b>RECORD</b> <i>Minnesota Statutes Chapter 103I</i>		Entry Date 05/11/2001	
647224		Quad Le Sueur				Update Date 12/20/2011	
		Quad ID 74B				Received Date	

<b>Well Name</b> GIESLER, CLEO <b>Township Range Dir Section Subsections Elevation</b> 872 ft. 111 26 W 11 DCCCC <b>Elevation Method</b> Calc from NED (Natl. Elev. Dataset-30m)				<b>Well Depth</b> 194 ft. <b>Depth Completed</b> 194 ft. <b>Date Well Completed</b> 10/23/2000																										
<b>Well Address</b> RR 1 BOX 236 LE SUEUR MN 56058				<b>Drilling Method</b> Non-specified Rotary																										
<table style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Geological Material</th> <th style="text-align: left;">Color</th> <th style="text-align: left;">Hardness</th> <th style="text-align: left;">From</th> <th style="text-align: left;">To</th> </tr> <tr> <td>SANDY</td> <td>TAN</td> <td>MEDIUM</td> <td>0</td> <td>28</td> </tr> <tr> <td>CLAY</td> <td>GRAY</td> <td>MEDIUM</td> <td>28</td> <td>136</td> </tr> <tr> <td>GRAVELY</td> <td>YELLOW</td> <td>MEDIUM</td> <td>136</td> <td>163</td> </tr> <tr> <td>SAND</td> <td>YELLOW</td> <td>MEDIUM</td> <td>163</td> <td>194</td> </tr> </table>				Geological Material	Color	Hardness	From	To	SANDY	TAN	MEDIUM	0	28	CLAY	GRAY	MEDIUM	28	136	GRAVELY	YELLOW	MEDIUM	136	163	SAND	YELLOW	MEDIUM	163	194	<b>Drilling Fluid</b> Water <b>Well Hydrofractured?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No From Ft. to Ft.	
Geological Material	Color	Hardness	From	To																										
SANDY	TAN	MEDIUM	0	28																										
CLAY	GRAY	MEDIUM	28	136																										
GRAVELY	YELLOW	MEDIUM	136	163																										
SAND	YELLOW	MEDIUM	163	194																										
				<b>Use</b> Domestic																										
				<b>Casing Type</b> Steel (black or low carbon) <b>Joint</b> Threaded <b>Drive Shoe?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No No Above/Below ft.																										
				<table style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Casing Diameter</th> <th style="text-align: left;">Weight</th> <th style="text-align: left;">Hole Diameter</th> </tr> <tr> <td>5 in. to 186 ft.</td> <td>15 lbs./ft.</td> <td>7.8 in. to 184 ft.</td> </tr> </table>		Casing Diameter	Weight	Hole Diameter	5 in. to 186 ft.	15 lbs./ft.	7.8 in. to 184 ft.																			
Casing Diameter	Weight	Hole Diameter																												
5 in. to 186 ft.	15 lbs./ft.	7.8 in. to 184 ft.																												
				<b>Open Hole</b> from ft. to ft.																										
				<b>Screen</b> YES <b>Make</b> JOHNSON <b>Type</b> stainless steel																										
				<table style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Diameter</th> <th style="text-align: left;">Slot/Gauze</th> <th style="text-align: left;">Length</th> <th style="text-align: left;">Set Between</th> </tr> <tr> <td>5</td> <td>12</td> <td>8</td> <td>186 ft. and 194 ft.</td> </tr> </table>		Diameter	Slot/Gauze	Length	Set Between	5	12	8	186 ft. and 194 ft.																	
Diameter	Slot/Gauze	Length	Set Between																											
5	12	8	186 ft. and 194 ft.																											
				<b>Static Water Level</b> 102 ft. from Land surface    Date Measured 10/23/2000																										
				<b>PUMPING LEVEL (below land surface)</b> ft. after 1 hrs. pumping 50 g.p.m.																										
				<b>Well Head Completion</b> Pitless adapter manufacturer MONITOR    Model 6PS56 <input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)																										
NO REMARKS				<b>Grouting Information</b> Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified  Grout Material: High solids bentonite    from 0 to 150 ft.    8 bags																										
<b>Located by:</b> Minnesota Department of Health <b>Method:</b> Digitization (Screen) - Map (1:24,000)				<b>Nearest Known Source of Contamination</b> 110 feet E direction    Septic tank/drain field type Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																										
<b>Unique Number Verification:</b> Information from owner <b>Input Date:</b> 09/15/2010				<b>Pump</b> <input type="checkbox"/> Not Installed    Date Installed _____ Manufacturer's name RED JACKET    Model number GRIZZLY    HP 0.75    Volts 220 Length of drop Pipe 130 ft.    Capacity 15 g.p.m.    Type Submersible    Material _____																										
<b>System:</b> UTM - Nad83, Zone15, Meters <b>X:</b> 427250 <b>Y:</b> 4919818				<b>Abandoned Wells</b> Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																										
				<b>Variance</b> Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																										
<b>First Bedrock</b> <b>Aquifer</b> <b>Last Strat</b> <b>Depth to Bedrock</b> ft.				<b>Well Contractor Certification</b> Geib Well Co.    72027    GEIB, S. License Business Name    Lic. Or Reg. No.    Name of Driller																										
<b>County Well Index Online Report</b>				<div style="display: flex; justify-content: space-between; align-items: center;"> <span style="font-size: 24pt; font-weight: bold;">647224</span> <span>Printed 1/5/2015 HE-01205-07</span> </div>																										

Minnesota Unique Well No.		County		Le Sueur		<b>MINNESOTA DEPARTMENT OF HEALTH</b> <b>WELL AND BORING</b> <b>RECORD</b> Minnesota Statutes Chapter 103I		Entry Date		10/24/1991	
469312		Quad		Le Sueur				Update Date		05/22/2014	
		Quad ID		74B				Received Date			

<b>Well Name</b> MOLLENHAUER, FLOYD <b>Township Range Dir Section Subsections Elevation</b> 111 26 W 11 DDCBCB Elevation Method 871 ft. Calc from NED (Natl. Elev. Dataset-30m)				<b>Well Depth</b> 184 ft. <b>Depth Completed</b> 184 ft. <b>Date Well Completed</b> 02/00/1991																																	
<b>Drilling Method</b> --																																					
<b>Well Address</b> RR 1 BOX 237 LE SUEUR MN 56058  <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Geological Material</th> <th style="text-align: left;">Color</th> <th style="text-align: left;">Hardness</th> <th style="text-align: left;">From</th> <th style="text-align: left;">To</th> </tr> <tr> <td>SANDY CLAY</td> <td>YELLOW</td> <td>MEDIUM</td> <td>0</td> <td>6</td> </tr> <tr> <td>GRAVEL</td> <td>YELLOW</td> <td>MEDIUM</td> <td>6</td> <td>67</td> </tr> <tr> <td>CLAY</td> <td>GRAY</td> <td>MEDIUM</td> <td>67</td> <td>142</td> </tr> <tr> <td>CLAY</td> <td>YELLOW</td> <td>MEDIUM</td> <td>142</td> <td>169</td> </tr> <tr> <td>SAND</td> <td>YELLOW</td> <td>MEDIUM</td> <td>169</td> <td>184</td> </tr> </table>				Geological Material	Color	Hardness	From	To	SANDY CLAY	YELLOW	MEDIUM	0	6	GRAVEL	YELLOW	MEDIUM	6	67	CLAY	GRAY	MEDIUM	67	142	CLAY	YELLOW	MEDIUM	142	169	SAND	YELLOW	MEDIUM	169	184	<b>Drilling Fluid</b> Water		<b>Well Hydrofractured?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No From Ft. to Ft.	
				Geological Material	Color	Hardness	From	To																													
				SANDY CLAY	YELLOW	MEDIUM	0	6																													
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				SAND	YELLOW	MEDIUM	169	184																													
				<b>Use</b> Domestic																																	
				<b>Casing Type</b> Steel (black or low carbon) <b>Joint</b> Threaded <b>Drive Shoe?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No No Above/Below 1 ft.																																	
				<b>Casing Diameter</b> 4 in. to 180 ft.		<b>Weight</b> 11 lbs./ft.		<b>Hole Diameter</b> 6.75 in. to 175 ft.																													
<b>Open Hole</b> from ft. to ft.																																					
<b>Screen</b> YES <b>Make</b> JOHNSON <b>Type</b> stainless steel																																					
<b>Diameter</b> 4 <b>Slot/Gauze</b> 10 <b>Length</b> 4 <b>Set Between</b> 180 ft. and 184 ft.																																					
<b>Static Water Level</b> 109 ft. from Land surface Date Measured 02/00/1991																																					
<b>PUMPING LEVEL (below land surface)</b> 112 ft. after 1 hrs. pumping 25 g.p.m.																																					
<b>Well Head Completion</b> Pitless adapter manufacturer BAKER Model 6PS45 <input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)																																					

NO REMARKS				<b>Grouting Information</b> Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified  Grout Material: Bentonite from to ft.			
<b>Located by:</b> Minnesota Department of Health <b>Method:</b> Digitization (Screen) - Map (1:24,000)				<b>Nearest Known Source of Contamination</b> 130 feet E direction Septic tank/drain field type Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>Unique Number Verification:</b> Information from owner <b>Input Date:</b> 09/15/2010				<b>Pump</b> <input type="checkbox"/> Not Installed Date Installed Manufacturer's name JACUZZI Model number 754 HP 0.75 Volts 220 Length of drop Pipe 147 ft. Capacity 14 g.p.m. Type Submersible Material Galvanized			
<b>System:</b> UTM - Nad83, Zone15, Meters <b>X:</b> 427251 <b>Y:</b> 4919929				<b>Abandoned Wells</b> Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>First Bedrock</b> <b>Aquifer</b> <b>Last Strat</b> <b>Depth to Bedrock</b> ft.				<b>Variance</b> Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>County Well Index Online Report</b>				<b>Well Contractor Certification</b> Geib Well Co. 72027 GEIB, D. License Business Name Lic. Or Reg. No. Name of Driller			

469312

Printed 1/5/2015  
HE-01205-07



# Minnesota Department of Natural Resources

Division of Ecological and Water Resources, Box 25

500 Lafayette Road

St. Paul, Minnesota 55155-4025

Phone: (651) 259-5109 E-mail: [lisa.joyal@state.mn.us](mailto:lisa.joyal@state.mn.us)

January 12, 2015

**Correspondence # ERDB 20150194**

Ms. Chantill Kahler Royer  
Bolton & Menk, Inc.  
1960 Premier Drive  
Mankato, MN 56001

RE: Natural Heritage Review of the proposed Traxler Construction Gravel Mine Expansion;  
T111N R26W Section 11; Le Sueur County

Dear Ms. Kahler Royer,

As requested, the above project has been reviewed for potential effects to known occurrences of rare features. A search of the Minnesota Natural Heritage Information System did identify rare features within an approximate one-mile radius of the proposed project, but these records did not include any federally listed species and were either historical or not of concern given the project details that were provided with the data request form. As such, I do not believe the proposed project will adversely affect any known occurrences of rare features.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location (noted above) and project description provided on the NHIS Data Request Form. Please contact me if project details change or if an updated review is needed.

Furthermore, the Natural Heritage Review does not constitute review or approval by the Department of Natural Resources as a whole. Instead, it identifies issues regarding known occurrences of rare features and potential effects to these rare features. Additional rare features for which we have no data may be present in the project area, or there may be other natural resource concerns associated with the proposed project. For these concerns, please contact your DNR Regional Environmental Assessment Ecologist (contact information available at [http://www.dnr.state.mn.us/eco/ereview/erp\\_regioncontacts.html](http://www.dnr.state.mn.us/eco/ereview/erp_regioncontacts.html)). Please be aware that additional site assessments or review may be required.

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources. An invoice will be mailed to you under separate cover.

Sincerely,

Samantha Bump  
Natural Heritage Review Specialist