



## Minnesota Department of Natural Resources

Division of Ecological and Water Resources, Box 25

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June 21, 2011

**Correspondence # ERDB 20110462**

Mr. Nick Monserud  
Sunde Engineering  
10830 Nesbitt Avenue South  
Bloomington, MN 55437

RE: Natural Heritage Review of the proposed Merriam Junction Non-Metallic Mine;  
T115N R23W Sections 16, 20, 21, 28, & 29; Scott County

Dear Mr. Monserud,

As requested, the Minnesota Natural Heritage Information System has been queried to determine if any rare species or other significant natural features are known to occur within an approximate one-mile radius of the proposed project. Based on this query, rare features have been documented within the search area (for details, see the enclosed database reports; please visit the Rare Species Guide at <http://www.dnr.state.mn.us/rsg/index.html> for more information on the biology, habitat use, and conservation measures of these rare species). Please note that the following **rare features may be adversely affected** by the proposed project:

- The Minnesota County Biological Survey (MCBS) has identified a Bulrush Marsh and a Silver Maple – (Virginia Creeper) Floodplain Forest within the project boundary (see enclosed map; these two native plant communities are not listed on the enclosed database reports). Both of these native plant communities have a state rank of 3, indicating that they are vulnerable to extirpation within Minnesota. Any impacts to these ecologically significant areas will need to be addressed.
- The Minnesota County Biological Survey has identified a Site of High Biodiversity Significance adjacent to the southern portion of the project boundary. Sites of Biodiversity Significance have varying levels of native biodiversity and are ranked based on the relative significance of this biodiversity at a statewide level. Sites ranked as High contain very good quality occurrences of the rarest species, high quality examples of the rare native plant communities, and/or important functional landscapes. This particular Site may contain Dry Sand – Gravel Oak Savanna, a native plant community that is critically imperiled or imperiled in Minnesota. Potential indirect impacts, including the introduction or spread of invasive species, to this ecologically significant site should be also addressed in the EIS.
- Rare plants in the vicinity of the project are associated with rock outcrops and native prairie. It should be determined whether either of these native plant communities exists within the project boundary. If so, a botanical survey should be conducted in any rock outcrops or native prairie that may be impacted by this project. The purpose of the survey would be to reduce the likelihood of an inadvertent taking of a state-protected plant, and to provide information to adequately describe the environmental impact of the proposed project. **Please contact me before**

**any survey work is initiated**, as the DNR would like the opportunity to provide feedback on surveyor qualifications and survey protocol. Please note that botanical surveys need to be conducted during the appropriate portion of the growing season, which may be limited.

- There is likely a bat colony located within the project boundary along Gifford Lake. Both the little brown myotis (*Myotis lucifugus*) and the big brown bat (*Eptesicus fuscus*) have been documented here. These two species are proposed to be listed as species of special concern in Minnesota.
- Several rare fish have been documented in the Minnesota River. If the project has the potential to impact the water quality or hydrology of the Minnesota River, impacts to these rare species will need to be addressed.
- Potential impacts to rare features should be included in the scoping EAW as an issue that will be addressed in the EIS. The EIS should address whether the proposed project has the potential to adversely affect the above rare features and, if so, the EIS should describe any measures that will be taken to avoid, minimize, or mitigate impacts.

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.

The enclosed results include an Index Report and a Detailed Report of records in the Rare Features Database, the main database of the NHIS. To control the release of specific location information, which might result in the destruction of a rare feature, both reports are copyrighted.

The Index Report provides rare feature locations only to the nearest section, and may be reprinted, unaltered, in an environmental review document (e.g., EAW or EIS), municipal natural resource plan, or report compiled by your company for the project listed above. If you wish to reproduce the index report for any other purpose, please contact me to request written permission. **The Detailed Report is for your personal use only as it may include specific location information that is considered nonpublic data under Minnesota Statutes, section 84.0872, subd. 2. If you wish to reprint or publish the Detailed Report for any purpose, please contact me to request written permission.**

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

Please note that locations of the gray wolf (*Canis lupus*), federally-listed as threatened and state-listed as special concern, and the Canada lynx (*Lynx canadensis*), federally-listed as threatened, are not currently tracked in the NHIS. As such, the Natural Heritage Review does not address these species.

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,



Lisa Joyal  
Natural Heritage Review Coordinator

enc. Rare Features Database: Index Report  
Rare Features Database: Detailed Report  
Rare Features Database Reports: An Explanation of Fields  
Map

cc: Melissa Doperalski  
Hannah Texler  
Krista Larson

Links: MCBS Sites of Biodiversity Significance  
[http://www.dnr.state.mn.us/eco/mcbs/biodiversity\\_guidelines.html](http://www.dnr.state.mn.us/eco/mcbs/biodiversity_guidelines.html)  
MCBS Native Plant Communities  
<http://www.dnr.state.mn.us/npc/index.html>

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Data valid for one year

Minnesota Natural Heritage Information System  
Index Report of records within 1 mile radius of:  
ERDB #20110462 - Merriam Junction  
T115N R23W Sections 16, 20, 21, 28, & 29  
Scott County

Rare Features Database:

Element Name and Occurrence Number	Federal Status	MN Status	State Rank	Global Rank	Last Observed Date	EO ID #
<b>Vertebrate Animal</b>						
<u>Cycleptus elongatus</u> (Blue Sucker) #4 T115N R23W S21, T115N R23W S29, T115N R23W S20; Carver, Scott County		SPC	S3	G3G4	1989-07-25	15746
<u>Dendroica cerulea</u> (Cerulean Warbler) #73 T115N R23W S29, T115N R23W S31, T115N R23W S30, T115N R23W S32; Carver, Scott County		SPC	S3B	G4	1997-06-21	22505
<u>Haliaeetus leucocephalus</u> (Bald Eagle) #1678 T115N R23W S30; Carver County		SPC	S3B,S3N	G5	1999	2796
<u>Haliaeetus leucocephalus</u> (Bald Eagle) #2277 T115N R23W S30; Scott County		SPC	S3B,S3N	G5	2005	31126
<u>Polyodon spathula</u> (Paddlefish) #4 T27N R24W S23, T115N R23W S16, T115N R23W S17, T115N R38W S28, T [...]; Blue Earth, Brown, Carver, Chippewa, [...] County		THR	S2	G4	2004-12-04	16501
<u>Scaphirhynchus platyrhynchus</u> (Shovelnose Sturgeon) #2 T115N R23W S10, T115N R23W S9; Carver, Scott County		NON	S4	G4	1987-06-05	16499
<u>Scaphirhynchus platyrhynchus</u> (Shovelnose Sturgeon) #3 T115N R23W S18, T115N R23W S20, T115N R23W S19, T115N R23W S17; Carver, Scott County		NON	S4	G4	1982-08-19	16498
<u>Scaphirhynchus platyrhynchus</u> (Shovelnose Sturgeon) #5 T114N R23W S6, T115N R23W S31, T115N R23W S32; Carver, Scott County		NON	S4	G4	1990-10-04	16482
<u>Scaphirhynchus platyrhynchus</u> (Shovelnose Sturgeon) #73 T115N R23W S10, T115N R23W S9; Carver, Scott County		NON	S4	G4	1999-09-30	26563
<b>Invertebrate Animal</b>						
<u>Actinonaias ligamentina</u> (Mucket) #91 T115N R23W S17, T115N R23W S31, T115N R23W S9, T115N R23W S1; Carver, Scott County		THR	S2	G5	1989-Pre	17125
<u>Actinonaias ligamentina</u> (Mucket) #92 T115N R23W S17; Carver, Scott County		THR	S2	G5	1989-08-17	17130
<u>Actinonaias ligamentina</u> (Mucket) #164 T115N R23W S20; Carver, Scott County		THR	S2	G5	1999-09-29	26440

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Scott County

Rare Features Database:

Element Name and Occurrence Number	Federal Status	MN Status	State Rank	Global Rank	Last Observed Date	EO ID #
<b>Invertebrate Animal</b>						
<u>Alasmidonta marginata</u> (Elktoe) #67 T115N R23W S17; Carver, Scott County		THR	S2	G4	1989-08-16	29490
<u>Arcidens confragosus</u> (Rock Pocketbook) #18 T115N R23W S17, T115N R23W S2, T115N R23W S31, T115N R23W S20, T [...]; Carver, Scott County		END	S1	G4	1989-Pre	26442
<u>Arcidens confragosus</u> (Rock Pocketbook) #26 T114N R25W S35, T109N R29W S7, T109N R30W S12, T114N R24W S30, T [...]; Blue Earth, Brown, Carver, Dakota, [...] County		END	S1	G4	2006-11-PRE	33200
<u>Cyclonaias tuberculata</u> (Purple Wartyback) #66 T115N R23W S17; Scott County		THR	S2	G5	2006-08-PRE	34191
<u>Ellipsaria lineolata</u> (Butterfly) #45 T115N R23W S17; Carver, Scott County		THR	S2	G4	2003-Pre	31483
<u>Elliptio crassidens</u> (Elephant-ear) #9 T115N R23W S31, T115N R23W S17; Carver, Scott County		END	S1	G5	1999-Pre	26432
<u>Elliptio dilatata</u> (Spike) #222 T115N R23W S17; Carver, Scott County		SPC	S3	G5	2003-10-13-PR E	33836
<u>Fusconaia ebena</u> (Ebonyshell) #7 T115N R23W S31, T115N R23W S17; Carver, Scott County		END	S1	G4G5	1989-08-17	17120
<u>Lampsilis higginsii</u> (Higgins Eye) #9 T115N R23W S17; Carver, Scott County	LE	END	S1	G1	1989-PRE	15416
<u>Lampsilis teres</u> (Yellow Sandshell) #8 T115N R22W S4, T115N R23W S31, T116N R22W S32, T116N R22W S33, T [...]; Carver, Hennepin, Scott County		END	S1	G5	1989-Pre	17143
<u>Lampsilis teres</u> (Yellow Sandshell) #10 T109N R27W S36, T111N R26W S22, T111N R26W S21, T115N R23W S20, T [...]; Blue Earth, Brown, Carver, Dakota, [...] County		END	S1	G5	1989-10-09	17146
<u>Lasmigona costata</u> (Fluted-shell) #50 T115N R23W S17; Carver, Scott County		SPC	S3	G5	1989-08-17	17114

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<b>Invertebrate Animal</b>						
<u>Ligumia recta</u> (Black Sandshell) #93 T115N R23W S17; Carver, Scott County		SPC	S3	G5	1989-08-17	17160
<u>Ligumia recta</u> (Black Sandshell) #470 T115N R23W S17; Carver, Scott County		SPC	S3	G5	2003-10-13-PR E	33920
<u>Megalonaias nervosa</u> (Washboard) #18 T115N R23W S17; Carver, Scott County		THR	S2	G5	2003-Pre	31487
<u>Obovaria olivaria</u> (Hickorynut) #55 T115N R23W S17; Carver, Scott County		SPC	S3	G4	1989-08-16	29489
<u>Obovaria olivaria</u> (Hickorynut) #135 T115N R23W S17, T115N R23W S31; Carver, Scott County		SPC	S3	G4	2003-10-PRE	33652
<u>Plethobasus cyphus</u> (Sheepnose) #8 T115N R23W S17; Carver, Scott County	C	END	S1	G3	2003-10-PRE	31379
<u>Pleurobema coccineum</u> (Round Pigtoe) #74 T115N R23W S17; Carver, Scott County		THR	S2	G4G5	1989-08-16	29491
<u>Pleurobema coccineum</u> (Round Pigtoe) #80 T115N R23W S20, T115N R23W S31, T115N R23W S17; Carver, Scott County		THR	S2	G4G5	1999-PRE	26441
<u>Quadrula fragosa</u> (Winged Mapleleaf) #16 T115N R23W S17; Carver, Scott County	LE	END	S1	G1	2003-10-Pre	31383
<u>Quadrula metanevra</u> (Monkeyface) #24 T115N R23W S17, T115N R23W S31; Carver, Scott County		THR	S2	G4	2003-10-Pre	17117
<u>Quadrula metanevra</u> (Monkeyface) #25 T115N R23W S17; Carver, Scott County		THR	S2	G4	1989-08-17	17118
<u>Quadrula nodulata</u> (Wartyback) #7 T115N R23W S2, T115N R23W S17, T115N R23W S31, T115N R23W S9, T [...]; Carver, Scott County		END	S1	G4	2000-09-20	17140
<u>Speyeria idalia</u> (Regal Fritillary) #41 T115N R23W S21, T115N R23W S28; Scott County		SPC	S3	G3	1975-07-06	23535

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<b>Invertebrate Animal</b>						
<u>Tritogonia verrucosa</u> (Pistolgrip) #25 T115N R23W S17, T115N R23W S31; Carver, Scott County		THR	S2	G4G5	2003-10-PRE	17153
<u>Tritogonia verrucosa</u> (Pistolgrip) #26 T115N R23W S17; Carver, Scott County		THR	S2	G4G5	1989-08-17	17152
<b>Animal Assemblage</b>						
<u>Bat Colony</u> (Bat Concentration) #41 T115N R23W S16; Carver, Scott County		N/A	SNR	GNR	2000-06-08	29684
<u>Bat Colony</u> (Bat Concentration) #42 T115N R23W S29; Scott County		N/A	SNR	GNR	1997-09-27	29685
<u>Colonial Waterbird Nesting Area</u> (Colonial Waterbird Nesting Site) #862 T115N R23W S33, T115N R23W S32; Scott County		N/A	SNR	GNR	1992	15646
<b>Vascular Plant</b>						
<u>Alopecurus carolinianus</u> (Carolina Foxtail) #34 T115N R23W S32; Scott County		NON	SNR	G5	2004-05-19	24420
<u>Bacopa rotundifolia</u> (Water-hyssop) #16 T115N R23W S32; Scott County		SPC	S3	G5	2004-06-24	24421
<u>Besseyia bullii</u> (Kitten-tails) #3 T115N R23W S21, T115N R23W S28; Scott County		THR	S2	G3	1979-05-05	3766
<u>Besseyia bullii</u> (Kitten-tails) #25 T115N R23W S28, T115N R23W S29; Scott County		THR	S2	G3	1993-06-20	3788
<u>Besseyia bullii</u> (Kitten-tails) #98 T115N R23W S32, T115N R23W S31; Scott County		THR	S2	G3	2004-05-19	21523
<u>Besseyia bullii</u> (Kitten-tails) #122 T115N R23W S33, T115N R23W S32; Scott County		THR	S2	G3	2003-05-23	31638
<u>Cirsium hillii</u> (Hill's Thistle) #13 T115N R23W S21, T115N R23W S28; Scott County		SPC	S3	G3	1972-07-12	4179

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<b>Vascular Plant</b>						
<u>Eleocharis wolfii</u> (Wolf's Spike-rush) #4 T115N R23W S32; Scott County		END	S1	G3G4	2004-06-24	24422
<u>Gymnocladus dioica</u> (Kentucky Coffee-tree) #12 T115N R23W S32, T115N R23W S31; Carver, Scott County		NON	SNR	G5	1996-09-27	22711
<u>Myosotis verna</u> (Forget-me-not) #13 T115N R23W S32; Scott County		NON	SNR	G5	2004-05-19	24419
<u>Myosurus minimus</u> (Mousetail) #34 T115N R23W S32; Scott County		NON	S4	G5	2004-05-19	24418
<u>Rorippa sessiliflora</u> (Sessile-flowered Cress) #2 T115N R23W S16, T115N R23W S17, T115N R23W S9, T115N R23W S10, T [...]; Carver County		SPC	S3	G5	1891-07	5464
<u>Talinum rugospermum</u> (Rough-seeded Fameflower) #24 T115N R23W S32; Scott County		END	S1	G3G4	2004-06-24	24680
<b>Native Plant Community (This may not represent a complete list. Also see MCBS Native Plant Communities at <a href="http://deli.dnr.state.mn.us">http://deli.dnr.state.mn.us</a>.)</b>						
<u>Dry Sand - Gravel Oak Savanna (Southern) Type</u> #5 T115N R23W S32, T115N R23W S31; Scott County	(NPC Code: UPs14b)	N/A	S2	GNR	1995-08-03	1207
<u>Dry Sand - Gravel Oak Savanna (Southern) Type</u> #7 T115N R23W S33, T115N R23W S32, T115N R23W S28, T115N R23W S29; Scott County	(NPC Code: UPs14b)	N/A	S2	GNR	2001-Pre	1206
<u>Dry Sand - Gravel Prairie (Southern) Type</u> #231 T114N R23W S4, T115N R23W S33; Scott County	(NPC Code: UPs13b)	N/A	S2	GNR	1996-09-09	17667
<u>Native Plant Community, Undetermined Class</u> #664 T115N R23W S33, T115N R23W S32; Scott County	(NPC Code: )	N/A	SNR	GNR	1995-10-02	21526
<u>Silver Maple - (Virginia Creeper) Floodplain Forest Type</u> #43 T115N R23W S33, T115N R23W S28; Scott County	(NPC Code: FFs68a)	N/A	S3	GNR	1995-10-02	21525
<u>Silver Maple - (Virginia Creeper) Floodplain Forest Type</u> #62 T115N R23W S32, T115N R23W S30, T115N R23W S31; Carver, Scott County	(NPC Code: FFs68a)	N/A	S3	GNR	1996-09-27	23498



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**Rare Features Database:**

Element Name and Occurrence Number	Federal Status	MN Status	State Rank	Global Rank	Last Observed Date	EO ID #
<b>Native Plant Community</b> (This may not represent a complete list. Also see MCBS Native Plant Communities at <a href="http://deli.dnr.state.mn.us">http://deli.dnr.state.mn.us</a> .)						
<u>Southern Bedrock Outcrop Class</u> #22 T115N R23W S29, T115N R23W S32; Scott County		(NPC Code: ROs12)	N/A	SNR	GNR	1995-08-03 21537
<b>Other (Ecological)</b>						
<u>Sedimentary structure (ordovician)</u> #9 T115N R23W S33, T115N R23W S32, T114N R23W S4, T114N R23W S5; Scott County			N/A	SNR	GNR	1972 130
<u>Sedimentary unit or sequence (ordovician)</u> #26 T114N R23W S5, T115N R23W S33, T115N R23W S32, T114N R23W S4; Scott County			N/A	SNR	GNR	1972 222

**Records Printed = 64**

Minnesota's endangered species law (*Minnesota Statutes*, section 84.0895) and associated rules (*Minnesota Rules*, part 6212.1800 to 6212.2300 and 6134) prohibit the taking of threatened or endangered species without a permit. For plants, taking includes digging or destroying. For animals, taking includes pursuing, capturing, or killing.

## Rare Features Database Reports: An Explanation of Fields

The Rare Features Database is part of the Natural Heritage Information System, and is maintained by the Division of Ecological and Water Resources, Minnesota Department of Natural Resources (DNR).

*\*\*Please note that the database reports are copyrighted and may not be reproduced without permission\*\**

### **Field Name: [Full (non-abbreviated) field name, if different]. Further explanation of field.**

#### **-E-**

**Element Name and Occ #:** [Element Name and Occurrence Number]. The Element is the name of the rare feature. For plant and animal species records, this field holds the scientific name followed by the common name in parentheses; for all other elements (such as native plant communities, which have no scientific name) it is solely the element name. Native plant community names correspond to Minnesota's Native Plant Community Classification (Version 2.0). The Occurrence Number, in combination with the Element Name, uniquely identifies each record.

**EO Data:** [Element Occurrence Data]. For species elements, this field contains data collected on the biology of the Element Occurrence\* (EO), including the number of individuals, vigor, habitat, soils, associated species, peculiar characteristics, etc. For native plant community elements, this field is a summary text description of the vegetation of the EO, including structure (strata) and composition (dominant/characteristic species), heterogeneity, successional stage/dynamics, any unique aspects of the community or additional noteworthy species (including animals). Note that this is a new field and it has not been filled out for many of the records that were collected prior to conversion to the new database system. Some of the information meeting the field definition may be found in the General Description field.

**EO ID#:** [Element Occurrence Identification Number]. Unique identifier for each Element Occurrence record.

**EO Rank:** [Element Occurrence Rank]. An evaluation of the quality and condition of an Element Occurrence (EO) from A (highest) to D (lowest). Represents a comparative evaluation of: 1) quality as determined by representativeness of the occurrence especially as compared to EO specifications and including maturity, size, numbers, etc. 2) condition (how much has the site and the EO itself been damaged or altered from its optimal condition and character). 3) viability (the long-term prospects for continued existence of this occurrence - used in ranking species only). EO Ranks are assigned based on recent fieldwork by knowledgeable individuals.

**Extent Known?:** A value that indicates whether the full extent of the Element is known (i.e., it has been determined through field survey) at that location. If null, the value has not been determined.

#### **-F-**

**Federal Status:** Status of species under the U.S. Endangered Species Act: LE = endangered; LT = threatened; LE,LT = listed endangered in part of its range, listed threatened in another part of its range; LT,PDL = listed threatened, proposed for delisting; C = candidate for listing. If null or "No Status" the species has no federal status.

**First Observed Date:** Date that the Element Occurrence was first reported at the site in format YYYY-MM-DD. A year followed by "Pre" indicates that the observed date was sometime prior to the date listed, but the exact date is unknown.

#### **-G-**

**General Description:** General description or word picture of the area where the Element Occurrence (EO) is located (i.e., the physical setting/context surrounding the EO), including a list of adjacent communities. When available, information on surrounding land use may be included. Note that the information tracked in this field is now more narrowly defined than it was in the old database system, and some of the information still in this field more accurately meets the definition of the new EO Data field. We are working to clean up the records so that the information in the two fields corresponds to the current field explanations described herein. Also note that the use of uppercase in sentences in this field is not significant but rather an artifact of transferring data from the old database system to the new system.

**Global Rank:** The global (i.e., range-wide) assessment of the relative rarity or imperilment of the species or community. Ranges from G1 (critically imperiled due to extreme rarity on a world-wide basis) to G5 (demonstrably secure, though perhaps rare in parts of its range). Global ranks are determined by NatureServe, an international network of natural heritage programs and conservation data centers.

#### **-L-**

**Last Observed Date:** Date that the Element Occurrence was last observed to be extant at the site in format YYYY-MM-DD.

**Last Survey Date:** Date of the most recent field survey for the Element Occurrence, regardless of whether it was found during the visit. If the field is blank, assume the date is the same as the Last Observed Date.

**Location Description:** County or Counties in which the Element Occurrence was documented followed by Township, Range, and Section information (not listed in any particular order). Each unique Township, Range, and Section combination is separated by a comma. In some cases, there are too many Township, Range, and Section combinations to list in the field, in which case, the information will be replaced with, "Legal description is too lengthy to fit in allotted space".

**-M-**

**Managed Area(s):** Name of the federally, state, locally, or privately managed park, forest, refuge, preserve, etc., containing the occurrence, if any. If this field is blank, the element probably occurs on private land. If "(Statutory Boundary)" occurs after the name of a managed area, the location may be a private inholding within the statutory boundary of a state forest or park.

**MN Status:** [Minnesota Status]. Legal status of plant and animal species under the Minnesota Endangered Species Law: END = endangered; THR = threatened; SPC = special concern; NON = tracked, but no legal status. Native plant communities, geological features, and colonial waterbird nesting sites do not have any legal status under the Endangered Species Law and are represented by a N/A.

**-N-**

**NPC Classification (v1.5):** Native plant community name in Minnesota's Native Vegetation: A Key to Natural Communities (Version 1.5). This earlier classification has been replaced by Minnesota's Native Plant Community Classification (Version 2.0).

**-O-**

**Observed Area:** The total area of the Element Occurrence, in acres, which is measured or estimated during fieldwork. If null, the value has not been determined.

**Ownership Type:** Indicates whether the land on which the Element Occurrence was located was publicly or privately owned; for publicly owned land, the agency with management responsibility is listed, if known.

**-S-**

**Site Name:** The name of the site(s) where the Element Occurrence is located. Sites are natural areas of land with boundaries determined and mapped according to biological and ecological considerations.

**Survey Site #/Name:** The name of the survey site, if applicable, where the Element Occurrence is located. Survey sites are sites that provide a geographic framework for recording and storing data, but their boundaries are not based on biological and ecological considerations. Minnesota County Biological Survey site numbers, if applicable, are also listed in this field.

**Survey Type:** Information on the type of survey used to collect information on the Element Occurrence.

**Surveyor(s):** Name(s) of the person(s) that collected survey information on the Element Occurrence.

**State Rank:** Rank that best characterizes the relative rarity or endangerment of the taxon or plant community in Minnesota. The ranks do not represent a legal status. They are used by the Minnesota Department of Natural Resources to set priorities for research, inventory and conservation planning. The state ranks are updated as inventory information becomes available. S1 = Critically imperiled in Minnesota because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. S2 = Imperiled in Minnesota because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. S3 = Vulnerable in Minnesota either because rare or uncommon, or found in a restricted range, or because of other factors making it vulnerable to extirpation. S4 = Apparently secure in Minnesota, usually widespread. S5 = Demonstrably secure in Minnesota, essentially ineradicable under present conditions. SH = Of historical occurrence in the state, perhaps having not been verified in the past 20 years, but suspected to be still extant. An element would become SH without the 20-year delay if the only known occurrences in the state were destroyed or if it had been extensively and unsuccessfully looked for. SNR = Rank not yet assessed. SU = Unable to rank. SX = Presumed extinct in Minnesota. SNA = Rank not applicable. S## = Range Rank: a numeric range rank (e.g., S2S3) is used to indicate the range of uncertainty about the exact status of the element. S#B, S#N = Used only for migratory animals, whereby B refers to the breeding population of the element in Minnesota and N refers to the non-breeding population of the element in Minnesota.

**-V-**

**Vegetation Plot:** Code(s) for any vegetation plot data that have been collected within this Element Occurrence (i.e., either Releve Number or the word "RELEVE" indicates that a releve has been collected).

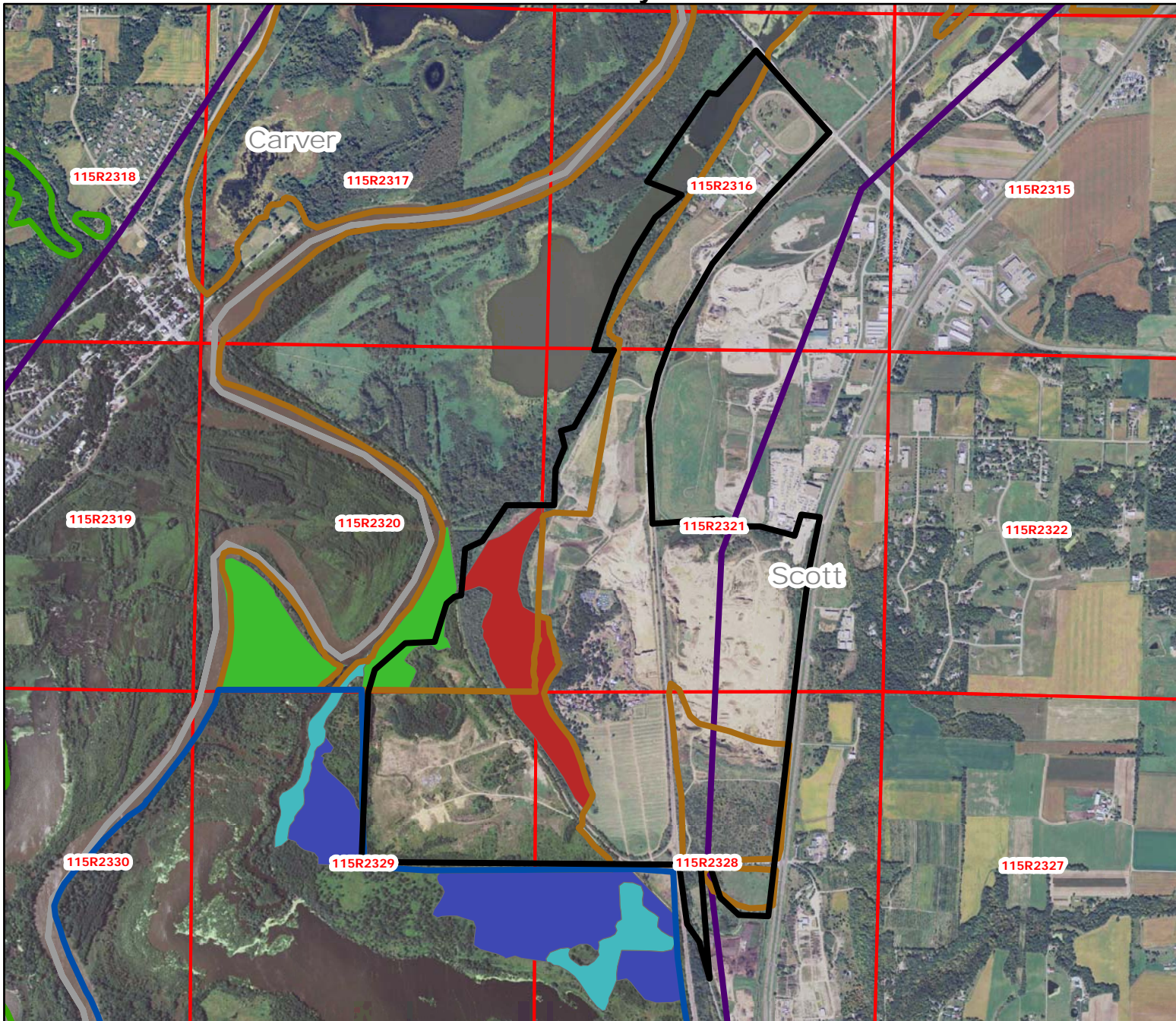
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\* Element Occurrence – an area of land and/or water in which an Element (i.e., a rare species or community) is, or was, present, and which has practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location. Specifications for each species determine whether multiple observations should be considered 1 Element Occurrence or 2, based on minimum separation distance and barriers to movement.

## Data Security

Locations of some rare features must be treated as sensitive information because widespread knowledge of these locations could result in harm to the rare features. For example, wildflowers such as orchids and economically valuable plants such as ginseng are vulnerable to exploitation by collectors; other species, such as bald eagles, are sensitive to disturbance by observers. For this reason, we prefer that publications not identify the precise locations of vulnerable species. We suggest describing the location only to the nearest section. If this is not acceptable for your purposes, please call and discuss this issue with the Natural Heritage Review Coordinator at 651- 259-5109.

ERDB #20110462 - Merriam Junction  
 T115N R23W Sections 16, 20, 21, 28, & 29  
 Scott County



Legend

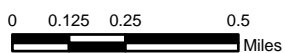
20110462

Sites of Biodiversity

- Outstanding
- High
- Moderate
- Below

Native Plant Communities

- Bulrush Marsh (Northern)
- Dry Sand - Gravel Oak Savanna (Southern)
- Pin Oak - Bur Oak Woodland
- Silver Maple - (Virginia Creeper)
- MN Bird Areas



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 Rare Feature, Prairie Railroad Survey, Native Plant Community,  
 and Sites of Biodiversity Significance data are from the  
 Division of Ecological Resource's Natural Heritage Information System.  
 The absence of rare features for a particular location should not be  
 construed to mean that the Division is confident rare features are absent  
 from that location.