

Mille Lacs Sand and Gravel Potential Matrix Table

Characteristics	Potential Rating			
	High	Moderate	Low	* Limited
Surficial Geology Features	Glaciofluvial outwash channels and ice contact features	Outwash channels and terraces; kames and eskers; alluvial terraces, fans, bars	Outwash channels and terraces; kames and eskers; alluvial terraces, fans, bars	Moraines; collapsed channels; glacial lake beds; colluvial slopes; alluvial features
Sediment Description	Sand and gravel	Sand with gravel	Sand to sand with gravel	Clay/silt/sand/sand and gravel
Probability¹	Moderately high to very high	Moderate to very high	Low to moderately low	Very low to low
Sand and Gravel Thickness (in feet)	15-40+	10-40+	5-40+	0-30+
Overburden Thickness (in feet)	0-15	0-20	0-50+	0-100+
Sand and Gravel Deposit Size (areal extent²)	Moderately large to very large (30-50+ acres)	Moderate to large (10-40 acres)	Small to moderate (10-50+ acres)	Very small to moderately small (0-10 acres)
Sand and Gravel Textural Characteristics³	Moderately good to very good	Moderate to very good	Moderately poor to good	Very poor to moderately good
Sand and Gravel Quality⁴	Moderately high to very high	Moderate to high	Low to high	Very low to moderately low

¹*Probability*: The degree of certainty that aggregate exists within a mapping unit.

²*Areal Extent*: The size, horizontal extent, or distribution of a unit (e.g., area in acres). This attribute does not necessarily reflect the size of an individual polygon but the size of a deposit found within that polygon.

³*Textural Characteristics*: Particle size distribution defined as the percent of gravel or sand vs. silt or clay (e.g., sieve analysis).

⁴*Quality*: The physical characteristics of the material, such as, soundness (e.g., magnesium sulfate test), durability (Los Angeles rattler test), and percent of deleterious rock types such as shale, iron oxide, and unsound chert.

*Limited potential map units are not visually displayed on the map. However, if the limited potential map units have been queried on, they will display in tabular format.

Mille Lacs Crushed Stone Potential Matrix Table

Characteristics	Potential Rating			
	High	Moderate	Low	* Limited
Bedrock Geology Features	Granite and other crystalline bedrock formations	Granite and other crystalline bedrock formations	Granite and other crystalline bedrock formations	Sedimentary rocks, metamorphic sedimentary rocks, schist, and shear zones
Depth to Bedrock	0 to 15 Feet	15 to 30 Feet	30 to 50 Feet	Greater than 50 Feet
Probability¹	Moderate to high	Moderately low to high	Low to moderately low	Very low to moderately low

¹Probability : The degree of certainty that aggregate exists within a mapping unit

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