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C4c-MR: Mine 10' above Water Table and Reclaim (Section 31, Hagen Township)

Aggregate Potential:

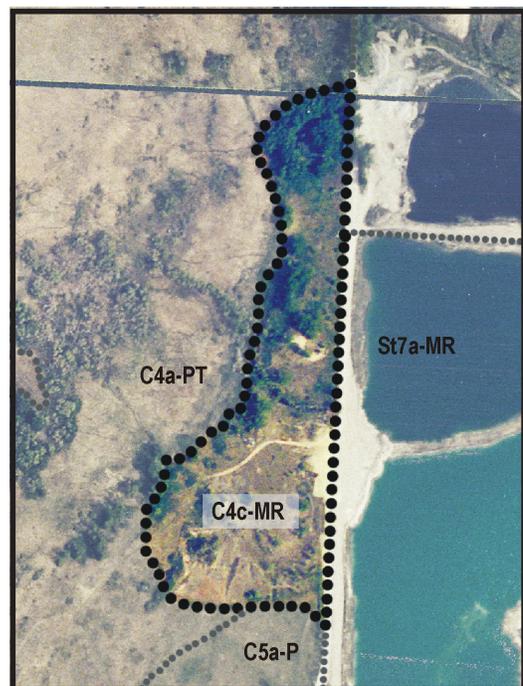
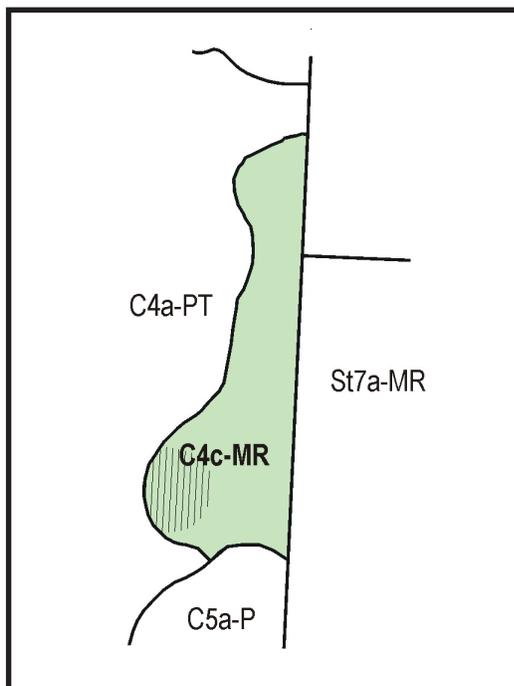
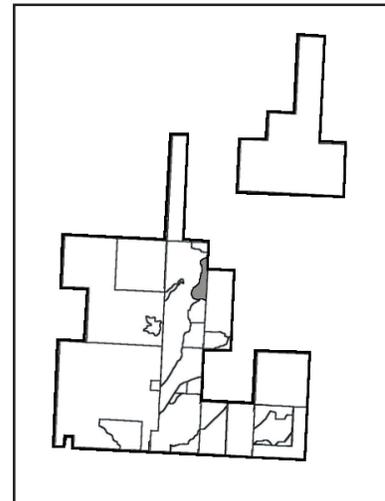
Presumed high because of proximity to State Trust Fund pit.

Prairie Habitat Assessment:

Area has been disturbed.

Fen Impacts:

Mining below the water table in this area could have significant impacts to the north fen. Mining must be restricted to 10' above the water table established by DNR in order to minimize impacts.



Area Statistics

	Landtype	Acres
	Grasslands	20.20
<i>Total</i>		20.20

Dakota Skipper Habitat

Habitat	Acres	
Confirmed Good	0.59	
<i>Total</i>		0.59

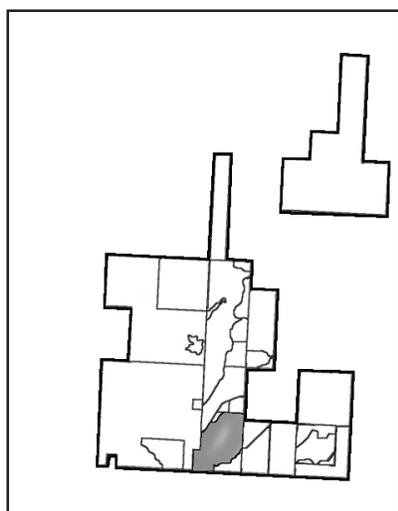
Recommendations:

All recoverable material 10' above the water table should be mined and the area reclaimed using native seed. Explore permanent protection after mining and reclamation by easement or sale.

Habitat Management: Maintain prairie with prescribed burning. Remove trees by girdling or cutting.

Timeframe: This area should be mined to meet current needs and reclaimed. Since this area is already disturbed it should be mined and reclaimed in 2001 or 2002.

Mine & Reclaim



C6d-MR: Clay County Gravel Mine – Mine Footprint to Depletion and Reclaim (Section 6, Keene Township)

Aggregate Potential:

This area has some of the highest quality aggregate and, because much of the overburden has already been stripped, some of the most accessible material.

Prairie Assessment:

The narrow sliver of dry prairie linking the county land north of the mine and Bicentennial Prairie SNA (C8a-P) should be preserved and used as a buffer in order to minimize fragmentation. Spoil piles are dominated by smooth brome grass, quack grass, sweet clover and other non-native vegetation. Additional problem species include cottonwood trees and scattered leafy spurge patches.

Fen Impacts:

The county may mine within the existing footprint or expand south with minimal impact to the fens. This includes mining below the water table when surface supplies are depleted.

Drillhole Statistics

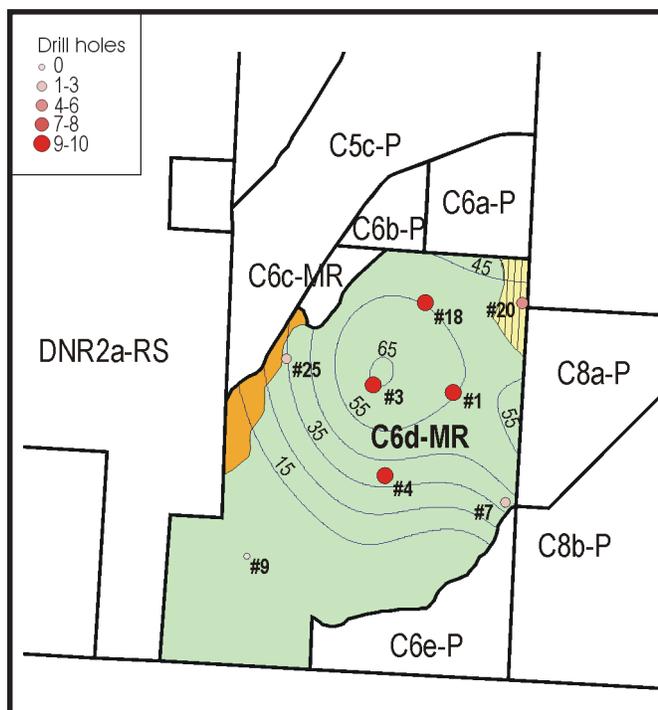
Drillhole	Gravel Thickness	Gravel Above Fen	Aggregate Ratio	Quality
1	55	NA	55.00	9.0
2	54	NA	54.00	9.0
3	65	NA	65.00	10.0
4	63	2.85	31.50	10.0
7	103	NA	51.50	3.0
9	0	NA	0.00	0.0
20	93	NA	46.50	6.0
25	5	NA	5.00	3.0

Area Statistics

Landtype	Acres
Mine Operation	115.60
Dry Prairie (Northwest) Sand Gravel Subtype	2.76
Mesic Prairie (Northwest)	4.27
<i>Total</i>	122.63

Dakota Skipper Habitat

Habitat	Acres
Confirmed Good	1.84
<i>Total</i>	1.84



Dotted contours represent the overburden to aggregate thickness ratio. Numbers represent the thickness of aggregate per foot of overburden.

Drillhole symbols are scaled and colored to represent the committee's estimate of the deposit quality. Quality increases with circle size and saturation.