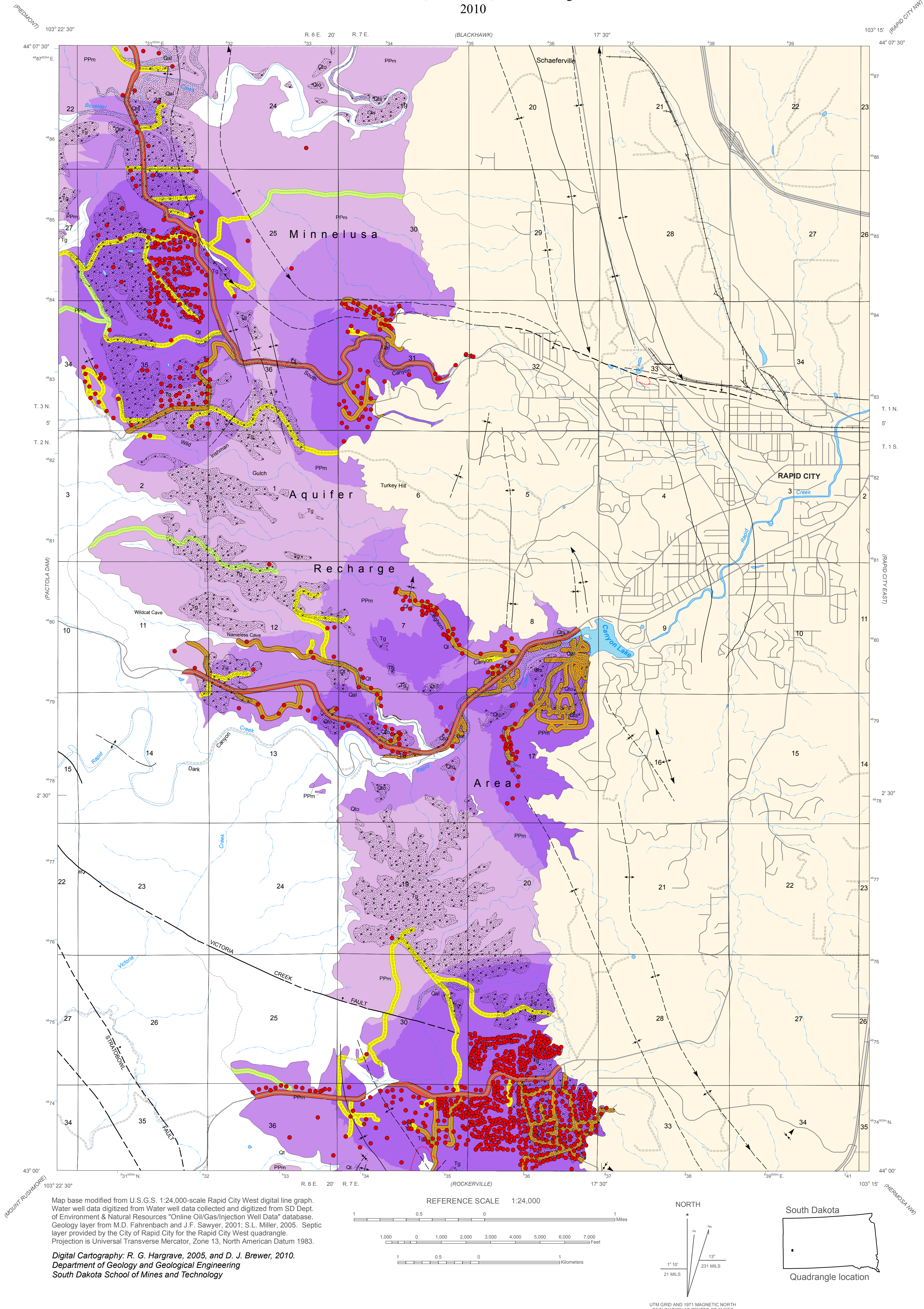


Aquifer Vulnerability of the Minnelusa Formation, Rapid City West Quadrangle

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Definition of Vulnerability

Aquifer vulnerability is the potential or likelihood that any contaminant could reach the ground-water supply, based on designated parameters described below.

Areas of increased aquifer vulnerability due to the presence of on-site septic systems in the Minnelusa recharge area.

Density (number of OSS per sq. mi.)	Rating
0 - 10	Low to Medium
10 - 40	Medium to High
40 - 570	High to Very High

Increased aquifer vulnerability due to the presence of roads (buffered 100 feet on either side) in the Minnelusa recharge area.

Type of Road	Rating
Trail	Low
Dirt Road	Low to Medium
Paved Road	Medium to High
Highway	High to Very High

EXPLANATION

- Intermittent Stream
- Perennial Stream
- Karst Features
- Rapid City Limits
- Black Hills Nat. Forest Boundary
- Interstate
- Railroad
- Lake
- Springs
- Wells penetrating Minnelusa aquifer
Number indicates elevation of top of Minnelusa Fm. in feet
- On-Site Wastewater Disposal System (OSWDS)

- Contact
Solid where location certain; dashed where approximately located.
- Fault
Solid where location certain; dashed where approximately located; queried where uncertain. Bar and ball on downthrown side.
- Anticline
Showing crestline and direction of plunge. Solid where location certain; dashed where approximately located.
- Syncline
Showing troughline and direction of plunge. Solid where location certain; dashed where approximately located.
- Monocline - Anticlinal bend
Axis located on steepest part of structure. Solid where location certain; dashed where approximately located.
- Monocline - Synclinal bend
Axis located on steepest part of structure. Solid where location certain; dashed where approximately located.

Geologic Units

- Recharge Area
Units present include alluvium (Qal) with stippled pattern, terrace deposits (Qt, Qt₂, Qt₃) with coarse stippled pattern, Minnelusa Formation (PPm) with no pattern. Color indicates varying degree of vulnerability; see "Definition of Vulnerability".
- Minnelusa Formation Present in Subsurface
- Minnelusa Formation Absent