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HYDROLOGIC ATLAS OF THE BLACK HILLS, PENNINGTON
COUNTY, SOUTH DAKOTA

PACTOLA DAM QUADRANGLE

Aquifer Susceptibility Maps

Aquifer Susceptibility:

In general, the capability of rocks to absorb water is referred to as *aquifer susceptibility*. The susceptibility rating is based upon the intrinsic characteristics of the rock, without regard to human influences. See chart at lower left of map for factors utilized in determining susceptibility rating.

Deadwood aquifer:

The recharge area of the Deadwood aquifer in the Pactola Dam Quadrangle comprises less than four square miles, extending southeastward across the northeast part of the quadrangle as a narrow band. The formation consists dominantly of layers of sandstone and shale (Anderson, F., 2005).

These rock layers are assigned a rating of **low susceptibility** (shown in pale yellow): locally, along streams where they are overlain by gravel deposits, a slightly higher rating is assigned.

References

- Anderson, F. J., 2002, Structural and Hydrological analysis of systematic fracture sets within Precambrian metamorphic and Lower Paleozoic sedimentary bedrock: Pactola Dam Quadrangle, Black Hills, South Dakota: M.S. thesis, South Dakota School of Mines and Technology, 108 p.
- Norton, J.J., Redden, J. A. and Anderson, F. J., 2008, Geologic Map of the Pactola Dam Quadrangle: GQ-24K-08, South Dakota Geological Survey,