# **STATE OF MINNESOTA DEPARTMENT OF NATURAL RESOURCES DIVISION OF WATERS**





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Depth to water table. Generally, the closer the water table is to the land surface, the quicker a contaminant can reach the water-table system. For this sensitivity factor, a map was developed showing where the water table was 20 feet or less below the land surface, which is the typical range of water-table depths in Stearns County as presented on Plate 8.

Sources of digital information used to develop this map included the Digital Elevation Model (DEM; 1:100,000 scale), the National Wetland Inventory (NWI; 1:24,000 scale), and the Stearns County Soil Survey (1:24,000 scale).

The subsurface permeability scores of all wells were plotted on a map of Stearns County. Three categories of estimated subsurface permeability were defined and then delineated on the map on the basis of scores.

activities and land uses on the ground-water quality at a countywide scale. DISCUSSION OF SENSITIVITY MAP

This plate shows the ground-water pollution sensitivity at the depth of 50 feet below the land surface. This depth is in the pumping range of shallow domestic and irrigation wells. The upper 50-foot zone in Stearns County includes

resources in Minnesota: Minnesota Department of Natural Resources, Division of Waters, St. Paul, MN, 122 p.

FIGURE 3. Matrix for rating pollution sensitivity at a depth of 50 feet below the land surface. Percent shown in cell indicates the total rated area of county for that condition. An inverted triangle means the total rated area of the county with that condition is less than 0.5 percent but greater than zero. Cells with no percent or triangle indicate conditions that are possible but were not found.

Subsurface permeability scores calculated for each of about 4100 well logs. See text for description of score calculations.



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