

SILURIAN-DEVONIAN AQUIFER VULNERABILITY MAP, BENTON COUNTY, IOWA

IOWA

Iowa Geological Survey

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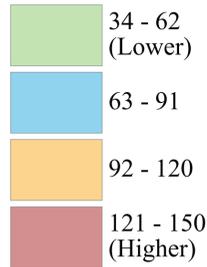
INTRODUCTION

The purpose of this map is to aid in the protection of the Silurian-Devonian Aquifer which is the primary source of drinking water in Benton County, Iowa. Data from previous state map projects (The Surficial Geologic map of Benton County, OFM-21-1; Bedrock Elevation Map of Benton County, OFM-21-2) was utilized for this project. The implemented groundwater vulnerability mapping method, DRASTIC, was developed by the National Water Well Association for the U. S. Environmental Protection Agency (Aller et al., 1987). The DRASTIC method was designed as a regional planning tool to assist in prioritizing local resources and in making land use decisions that protect our groundwater resources. The method is not intended for site-specific assessments (< 100 acres). The DRASTIC method allows the groundwater pollution potential of an area to be systematically evaluated by integrating the hydrogeologic factors that most influence pollution potential. The results of those analyses are compiled into a single map by the superposition of the factors and then adjusted using a standardized relative rating and weighting procedure. The DRASTIC method identifies areas that are more or less vulnerable to contamination and displays this information graphically on a map. A value on the the DRASTIC Vulnerability Index (DVI) equates to a higher risk for aquifer vulnerability.



Figure 1. The location of Benton County in Iowa.

DRASTIC VULNERABILITY INDEX



DRASTIC METHOD

