INTRODUCTION

This paper describes the relative sensitivity of theuvicifers in Pope County, Minnesota, in relation to pollution sensitivity. The aquifers are characterized by their water quality, hydrogeological setting, and their potential for contamination. The study area is located in the western two-thirds of Pope County, Minnesota, near Superior, Wisconsin. The aquifers within this region are of primary interest in this study because they are the most likely to be affected by pollution. The aquifers receive a high level of recharge from shallow discharge, and hence, they are more prone to pollution sensitivity.

The aquifers in this region are predominantly sand and gravel, with a high permeability. This hydrogeological setting is conducive to rapid ground-water flow and high pollution sensitivity. The aquifers are characterized by their high vulnerability to pollution, which is largely due to their high permeability and lack of a protective layer.

SUSCEPTIBILITY TO POLLUTION OF THE BURIED AQUIFERS

This part of the study focuses on evaluating the pollution sensitivity of the buried aquifers in Pope County. The pollution sensitivity is calculated using the vertical travel time (VTT) method, which is based on the distance traveled by water through the aquifer. The VTT is determined by subtracting the elevation of the top of the aquifer from the elevation of the base of recharge layer 1. The pollution sensitivity is calculated as the product of the VTT and the vertical velocity of ground water.

The pollution sensitivity is further classified into five categories: very low, low, moderate, high, and very high. The classification is based on the pollution sensitivity of the aquifers, which is calculated as the product of the VTT and the vertical velocity of ground water. The pollution sensitivity is classified into five categories: very low, low, moderate, high, and very high.

EVALUATION OF BURIED AQUIFERS

The results of the pollution sensitivity modeling should be considered preliminary. The accuracy of the pollution sensitivity modeling is limited by the uncertainty in the hydrogeological setting and the pollution sources. However, the results of the pollution sensitivity modeling provide useful information for the management of ground-water resources in Pope County.

REFERENCES