This map combines hydrogeologic settings with relative ground water pollution potential ratings called DRASTIC indices. It depicts pollution potential which may result from concentrated point-of-application pollutants, such as accidental spills, leaking pipelines or tanks, land disposal of wastes in pits or landfills, domestic wastes and leaking septic tanks, industrial and commercial waste dumping or spillage, and municipal waste disposal sites. Pollution potential is the ability of a pollutant to enter an aquifer and cause contamination of ground water. It is a combination of hydrogeologic factors, anthropogenic influences and sources of contamination. Plate 2 Ground-Water Pollution Potential—Agricultural Sources, depicts pollution potential which may result from widespread, surface applied pollutants such as pesticides and fertilizers.

DRASTIC was developed as a standardized system for evaluating ground water pollution potential of hydrogeologic settings. A combination of ratings and weights produces a numerical value, the DRASTIC index. These index numbers, in combination with the hydrogeologic setting boundaries, are used to develop the DRASTIC map.

The word DRASTIC is an acronym for the parameters used to arrive at the index number. The Environmental Protection Agency (EPA) report EPA 600/2-87/035, entitled, DRASTIC: A Standardized System for Evaluating Ground Water Pollution Potential Using Hydrogeologic Settings, describes the initial development of the DRASTIC methodology and basic assumptions underlying the methodology. The system was designed to be of use to those concerned with planning and managing land and ground water resources; to serve as a tool for prioritizing protection and monitoring of ground water; and to be useful as a learning tool. An understanding of the factors which make up the DRASTIC index will help the map user to interpret the meaning of this map.

The hydrogeologic settings are delineated surface areas which represent a single unit of similar hydrologic and geologic parameters. A unique set of DRASTIC factors represents each area and a single DRASTIC index number is used to represent the setting. Hydrogeologic settings form the basis of the DRASTIC system and incorporate parameters which affect and control ground water movement to and within the aquifer. The hydrogeologic settings which make up the units of this map are analogous to rock units on a geologic map. They are not analogous to topographic contours; each boundary represents a distinct change in the value of the DRASTIC index. It is not appropriate to interpolate values between boundaries on this map.

DRASTIC employs the evaluation of seven measureable parameters, or factors, for each hydrogeologic setting. The factors are combined in determining an index for ground water pollution potential. They are based upon the use of existing, readily available data by workers with only a basic knowledge of hydrogeology and the processes which govern ground water contamination. These factors include:

D Depth to water—the range for this parameter varies from 0 to greater than 100 feet below land surface.

R Net recharge—this is the annual net recharge which reaches the aquifer in question and ranges from 0 to greater than 10 inches per year.

A Aquifer media—the geologic material which the aquifer is composed of, ranging from such rock types as massive shales to karst limestone. Ratings vary by lithology. Information presented on this map applies to unconfined, or water table aquifers, only.

S Soil media—the soil material and its thickness are evaluated for this parameter. Soil types range from gravel to clay loam.

T Topography—topographic relief, expressed as percent slope, range from 0 percent to greater than 18 percent slope. Percent slope is the ratio of vertical change over horizontal change. A 1 percent slope is an elevation change of 52.8 feet per mile of horizontal distance.

I Vadose zone—the impact of the vadose zone material is evaluated, based on the lithologic description of the material. Descriptions include sand and gravel, sandstone, and basalt, among others.