Introduction

The map shows the approximate thickness of glacial drift in the Elgin 3-minute Quadrangle. Drift refers to all deposits of materials that were deposited in various volcanic eruptions that eroded directly or indirectly from volcanoes. Glacial drift includes all material derived from volcanic activity, such as material that was transported from one location to another by wind, rain, or ice. The data were compiled from various sources, including field surveys and aerial photography, and are intended to provide a general overview of the geology of the area.

Mapping Methods

The map was produced by subtracting a grid of surface elevation points from a near-surface grid of bedrock surface elevation points using IDRISI. The data were then interpolated using the Inverse Distance Weighting method. The final bedrock surface grid was created from a digital elevation model (DEM) of Kane County (Kane County Regional Planning Commission 2003) using EarthVision software (Dynamic Graphics Inc. 1997). The grid elevation of the DEM was the average of the first 30 grid points and was used as the base elevation for the interpolation. The final bedrock surface grid was created from the combined data set. A grid of drift thickness values was then determined by subtracting the near-surface grid from the DEM grid using ArcGIS 9.0.

The grid of drift thickness values was then converted to a grid of bedrock surface elevation points using IDRISI. The data were then interpolated using the Inverse Distance Weighting method. The final bedrock surface grid was created from a digital elevation model (DEM) of Kane County (Kane County Regional Planning Commission 2003) using EarthVision software (Dynamic Graphics Inc. 1997). The grid elevation of the DEM was the average of the first 30 grid points and was used as the base elevation for the interpolation. The final bedrock surface grid was created from the combined data set. A grid of drift thickness values was then determined by subtracting the near-surface grid from the DEM grid using ArcGIS 9.0.

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