

Geographic Information System

Development of a geographic information system (GIS) started in 1990 as a joint effort between Sioux Falls and the county. GIS is a computer technology used to gather, store, manipulate, analyze and display spacial information in digital format.

GIS technology provides a valuable tool to assist in implementing the comprehensive plan. Much of the spacial information gathered for this plan has been entered into the GIS, including land parcels, existing land use, flood plains, aquifers, water resources, topography and transportation systems. Boundaries of service areas for school, fire, and sewer exist as coverages. Other features such as public well sites, pipelines, railroads, electrical transmission lines and aerial photography are also in the data base.

This data is not new but since it generally existed as single purpose paper maps, manipulation and analysis of data was extremely difficult. A GIS involves spacial operations such as the linking of data from different sets which is stored in digital form. For example, the location of failed septic systems can be shown along with soil type, terrain features and water resource information so an analysis can be performed to determine the impact of various combinations of elements. Modeling can be performed to determine the impact of new highway construction or if hazardous materials will reach the groundwater and how quickly. It is recommended that GIS technology be used to assist in the implementation of the Comprehensive Plan as well as to support other county departments.