

4.4.3

Use of GIS in a transportation recovery plan for disaster response

Presenter

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Planning is an important part of an effective recovery plan. For areas with little historical data on natural disasters, this planning can be very difficult because the exact damage levels are not easily predictable. By establishing an extensive database in GIS, information is readily available when a disaster strikes.

Research has shown that GIS is becoming an integral part of supporting damage assessment, rebuilding and public education after a disaster. The use of GIS software is ideal for handling all of the data necessary for modeling after a natural disaster because an extensive database, including information such as system facilities, year they were built and current condition, is needed. A database should be able to integrate all of the information and to establish relationships between various attribute data and key infrastructure features. The visualization capabilities also make GIS ideal for natural disaster modeling. GIS mapping allows locations of key facilities to be overlaid with damage estimates for quick visual reference. Widespread use of GIS by emergency management agencies, due to more affordable technologies, can enhance the efficiency and productivity of their efforts. GIS enables an emergency manager to visualize and analyze natural disaster situations more accurately.

This presentation would discuss the use of GIS as an integral part of a transportation recovery plan after a natural disaster. The use of the Network Analyst tool is a vital part of the plan in establishing priority routes to be reconstructed after the disaster.