

## **Using WSR-88 (NEXRAD) Radar Data for an ISGW Model Precipitation Input Sensitivity Analysis**

Thomas M. Liebert and Alaa Aly, Ph.D.

### **Abstract**

Methods of spatially interpolating point measurements to estimate areal precipitation are advancing by using GIS. The highly variable spatial and temporal distribution of rainfall demands a method specific to the time interval and geographic area of interest, where generally the shorter the time interval and smaller the geographic area, the greater the error in interpolation. A quantitative measure of the success of these methods may be made by a comparison to precipitation measurements by weather radar. Efforts to obtain, process and import into a GIS the NEXRAD 'Hourly Digital Precipitation Array' (DPA) product for a sensitivity analysis of precipitation input to an ISGW model are described. Comparison of the existing precipitation model input to the NEXRAD radar measurements is outlined, including correlation of radar data to ground-based rain gage data, deconstructing of daily gage records, and definition of rain/no-rain polygons.

140 words