

**Advanced Hydrologic Monitoring, Assessment, and Flood Forecasting for Eastern Iowa –  
University of Iowa**

**Proposed recipient:**

University of Iowa  
320 S. Riverside Drive, 306 SHL  
Iowa City, IA 52242

**Requested amount:**

\$1,000,000

**Explanation of request:**

This project will accomplish two interrelated objectives. First, the university proposes to implement the Iowa Watershed Approach in the Lower Cedar River and Maquoketa River Watersheds. The Iowa Watershed Approach is a systems-wide approach to improving community resilience to flooding and flooding. The Lower Cedar River and Maquoketa River in Eastern Iowa have already formed Watershed Management Authorities and seek funding to complete the next three activities. These are: 1) increase the number of stream stage sensors, water quality sensors, rain gauges, and other remote sensing instrumentation in the watershed to collect hydrologic data and monitor hydrologic conditions throughout the watershed in real time; 2) develop a high-resolution hydrologic assessment and visualization system for the entire watershed; and 3) develop enhanced forecasting tools to predict and communicate impending flood events. The University of Iowa will complete all the work of these three activities. The cost for these activities is \$640,000 based on the same work completed by the applicant team in several other Iowa watersheds. Second, the university proposes to expand the Iowa Flood Center's network of hydrologic stations in Eastern Iowa by installing one hydrologic station in each county in Districts 1 and 2 that do not currently have a station (28 counties). Each hydrologic station measures rainfall, wind speed and direction, soil moisture and temperature, and water levels in a shallow groundwater well. These stations inform forecast models and provide critical publicly available data to local landowners, researchers, and agencies. The data will be especially relevant to the new Cooperative Institute for Research to Operations in Hydrology, of which the University of Iowa is a key partner, for calibration of models. The cost for this component is about \$360,000 (30 stations x \$12K each) and all work for construction and deployment will be done by University of Iowa professional staff and engineers.