

LEON COUNTY CAPITAL AREA FLOOD WARNING NETWORK



7/5/2006

Leon County, Florida, and the City of Tallahassee jointly fund a monitoring network in Leon County operated by the NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT.

The county was awarded a grant to establish a real-time monitoring network, the Capital Area Flood Warning Network, which includes existing and new monitoring stations in Leon County area. The funding for the project is through a grant from the Florida Department of Community Affairs Emergency Managements Preparedness and Assistance Grants Program.

This project established the basic infrastructure for real-time rainfall data collection to facilitate the identification of developing flood conditions, notification for emergency managers, and initiation of the appropriate emergency response.

PROJECT SCOPE

Sutron delivered a complete turn-key flood warning system. Significant elements of the system are as follows:

RADIO SYSTEM ENGINEERING, DESIGN, & LICENSING

Sutron performed a complete radio path survey to ensure adequate communications paths for all transceivers. Sutron conducted detailed computer modeling of the proposed communications network prior to performing a physical path analysis on site.

The data collected from the physical path analysis was utilized to verify the computer generated results and determine more accurate path loss data. With this data Sutron engineers developed a complete RF design package that specified the following.

- Antenna types
- Antenna height
- Co-phasing requirements
- Repeater location
- Transmitter power requirements

A substantial portion of the radio system design for this system was Sutron's design of a 100W duplex radio repeater which was installed at the center of City of Tallahassee atop a 12-story building. The antenna elevation was nearly 200' above ground level and required design and installation of 40' antenna tower on top of the building.



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DATE:	March 2004 to January 2005
TOTAL:	\$267,000

FLOOD MONITORING STATION DESIGN, INTEGRATION, & INSTALLATION

As part of this project Sutron designed and installed 14 flood monitoring stations. These stations were based on Sutron's 9210 dataloggers, rain gauges, and pressure transducers. Design elements included equipment specification, programming specifications, grounding design, solar system design, and antenna mast design. All equipment was preassembled at Sutron's Sterling, Virginia facility and installed by the Hydrological Services Division's personnel.

SUTRON