



CITY OF SUGAR LAND

Engineering Department

CIP Project Number: DR0901

Title: Radar Based Flood Alert System

Project Phase: Design

% of Phase Completion

Design



Cost for this Phase: \$ 80,000

Funding Sources: General Revenue

Project Manager: Shashi Kumar, P.E.

Contractor: NA – Study/Design

Consultant: PB Bedient and Associates

Project Description:

The radar based Flood Alert System is an enhancement to the City's current Flood Alert System, and is proposed to be integrated with the existing system. This system has the ability to provide early warning on an imminent flooding situation, so that that it provides lead time for operational personnel to plan for emergency response. This ALERT system is initially proposed for the Oyster Creek Watershed.

Justification: The radar based ALERT System provides "lead time" in flood warning, which is an added advantage over the conventional ALERT systems. The benefits of this system outweigh the costs of implementation. City of Austin and Rice University Campus are some of the entities that have successfully implemented this system.

Updates:

February 2009: Consultant has been selected and the scope is being finalized. Award of contract is being scheduled for the March 17, 2009 City Council Meeting.

March 2009: Award of contract is being scheduled for the April 7th, 2009 City Council Meeting. Engineering staff reviewed the set-up of a similar system for the Brays Bayou/ Rice University Campus.

June 2009: A meeting was held with Phillip Bedient and Associates to get update on the project. Model updates are underway and the project is approximately 20% complete

July 2009- Consultant has requested historical rainfall data for model development and calibration. Data collection effort is currently underway.

August 2009-Historical rainfall/ stream level data was furnished for the consultant to facilitate model development/ calibration.

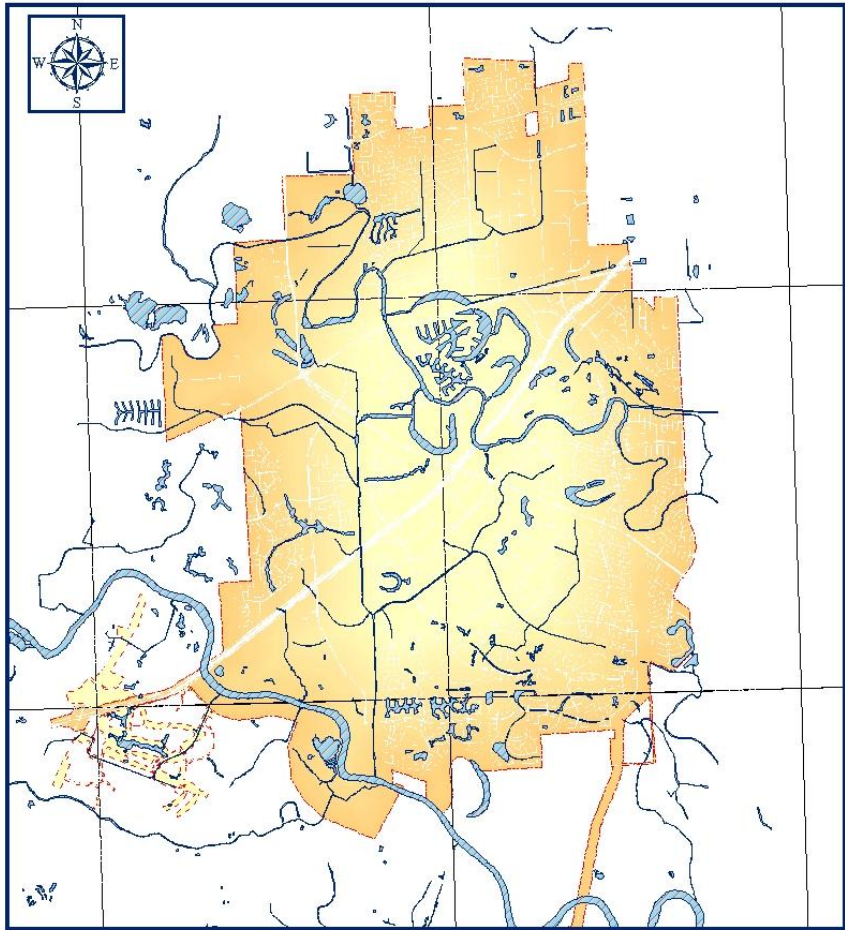
September 2009-Model calibration effort is underway. A progress meeting is scheduled in mid October and more details would be made available at this meeting.

December 2009 - Model calibration effort is still underway. Due to lack of significant rain events in 2009, the calibration effort had to be extended so as to gather rainfall/ stream level data during more significant rain events. The rain events that occurred in fall/ winter of 2009 would facilitate this effort. A BETA version of the ALERT system is expected to be ready by February 2010.

March 2010 – The project is about 90% complete. A workshop is being planned for City Council on 4/6/2010.

June 2010 – At a workshop in May 2010, the City Council was provided an update on the project. Additional (major) rainfall events are to be analyzed to better calibrate the model to increase forecast accuracy. The pilot project is anticipated to continue until Dec. 2010 to facilitate additional data collection.

September 2010 – Additional (major) rain events were picked-up in July. Model calibration is underway for these events. Acquisition of radar based rainfall for one additional year to facilitate model calibration is being authorized.



City of Sugar Land
Capital Improvement Program

**DR0901
Radar Based
Flood Alert**

