

Complete Program of Research and experimentation proposed

US3 makes a sewer overflow sensor designed to alert the City of Houston when sewer levels exceed an acceptable threshold. The device will be installed in Combined Sewer Overflow (CSO) and Sanitary Sewer Overflow (SSO) locations to monitor regulated flow conditions.

When the sewer level exceeds the acceptable threshold, the ultrasonic sensor detects this, and a voltage output signal will be sent as an alarm, over the OpenWay Riva network, to the US3 application.

Description of equipment and theory of operation

The waterproof enclosure contains:

- Itron Riva Modular LE
- batteries to power device
- Batteries to power External Devices
- TTL Relay
- antenna
- connection to the ultrasonic sensor
- Connection to a Single point level sensor

Outside the orange enclosure, there is a secondary float sensor that hangs at the alarm level in case the ultrasonic sensor fails to detect the dangerous water level as it rises.

Specific objectives sought to be accomplished

The purpose of the device is to increase safety by detecting rising sewer level, and providing notification so action can be taken to prevent sewer overflow within the City of Houston. In addition, the program will achieve greater efficiencies with regards to maintenance activities on the sewer system, by pinpointing those areas where maintenance is required to resolve issues that cause rising sewer levels.

How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion, or utilization of the radio art, or is along a line not already investigated

