Fact Sheet

Project Name:	Lower Rio Grande Valley Real Time Surface Water Monitoring Pilot Program, in Edinburg, Texas	**Completion Date:**	06-Feb-2024
Project Location:	City of Edinburg, Texas	**Project ID:**	1291
Goal:	Characterized a local channel by installing an RTHS Station for monitoring and awareness to the community	Technical Rep:	Linda Navarro
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		NADBank:	Briselda Duarte

Pre-Project Conditions

City officials from City of Edinburg recommended the project since based on their experience the site tends to have flooding issues and water quality concerns

Project Objective

1. **Monitor a local ditch in the city of Edinburg**: The primary objective is to monitor the Fair Haven ditch in Edinburg.
2. **Address flooding and water quality concerns**: The monitoring is conducted to address issues related to flooding and water quality as observed by City officials.
3. **Deploy a Real-Time Hydrological System (RTHS)**: Use advanced technology (RTHS station) to continuously retrieve meteorological and water surface elevation data

Project Scope

Duration: The project spans 18 months.
Monitoring Station: Utilize a Real-Time Hydrological System (RTHS) station for continuous data retrieval.
Sampling Campaigns: Conduct four quarterly sampling campaigns to gather instantaneous flow and water quality data, including E. Coli, Total Phosphorus, Total Kjeldahl Nitrogen, and Nitrate-Nitrite.
Geographical Scope: The project covers the Fair Haven ditch and involves presentations and surveys across Hidalgo, Cameron, and Willacy Counties in the Lower Rio Grande Valley region.
Elevation Corrections: Obtain elevation corrections from a national agency (OPUS Solution) to ensure accurate elevation data

Project Cost

B2025 Awarded Amount:	$50,000
Total Project Cost:	$45,930.13
Project Length	18 months
Benefited Population:	102,483

Results

Outcomes

Awareness of Water Quality Issues: Presentations conducted across three counties help raise awareness of water quality issues and non-point source pollution in local city ditches.
Improved Flood Management: The project assists city officials in flood management planning by monitoring water levels in real-time and receiving alerts at crucial elevations.
Installation of Additional Monitoring Station: The city of Edinburg installs a second monitoring station for further monitoring.

Links to Project Websites:

- **Main Project site:** Website
- **Presentation to stakeholders:** Website
- **RTHS Data:** Website
- **Regional Base map:** Website

Outputs

Continuous Data Streams: Data collected through the Real-Time Hydrological System (RTHS) station, including meteorological and water surface elevation data. **Quarterly Sampling Data:** Data from four quarterly sampling campaigns, providing information on flow and water quality, including specific parameters.
Workshops and Presentations: Six workshops and one regional conference a (total of 80 stakeholder reached) presentation conducted to share the status and results of the monitoring with stakeholders.
Survey Component: Elevation data of the study area obtained through a survey component. Two surveys were conducted: Static data (for OPUS) was collected and a full survey of the Fair Haven ditch (cross-sections)
Elevation Corrections: Corrections obtained from the national agency (OPUS Solution) for accurate site elevations.
Increased Awareness: Awareness increased among 80-100 stakeholders across the Lower Rio Grande Valley region.
City Action: The installation of a second monitoring station in the city of Edinburg demonstrates a tangible outcome of the project.

Significant Project Contributions

The first real-time monitoring system was introduced in the western region of Hidalgo County at the Fair Haven Ditch, which would eventually support and be integrated with Texas Water Development Board Flood Infrastructure Fund (TWDB FIF) and local partners (Donna, Edinburg, Weslaco, and San Benito) 50+ RTHS stations in the near upcoming year for the objective of monitoring, modeling, and decision-making purposes at a regional scale