

HIDALGO COUNTY

# DELTA REGION

WATER MANAGEMENT PROJECT



# ABOUT

## HIDALGO COUNTY DRAINAGE DISTRICT NO. 1

*Hidalgo County Drainage District No. 1 was created on April 9, 1908 by Order of the Commissioners' Court of Hidalgo County, Texas, pursuant to an election held within the territory affected on March 24, 1908. the Board of Directors has been made up of the County Judge and 4 County Commissioners.*



### Mission

The mission of the Hidalgo County Drainage District No. 1 (HCDD1) is to proactively manage the Hidalgo County Master Drainage System and allow for the efficient exportation of drainage water, to protect life and property for Hidalgo County residents, businesses and surrounding jurisdictions.

### Vision

Our vision is to improve Hidalgo County's Drainage System in order to enhance long-term economic development opportunities throughout our District by implementation of innovative technology in an environmentally conscious manner.

### Values

- Community driven decisions
- Transparency
- Stewardship of tax dollars
- Commitment to Improving Flood Control
- Collaboration with Local, State and Federal Entities

# PROJECT

## DELTA REGION WATER MANAGEMENT PROJECT

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### Details

A regional mitigation project that will provide increased flood control for the most populated areas of Hidalgo County and establish a process to reclaim the water for municipal and/or irrigation use. This project is proposed to be constructed in three phases and includes an off-line storm water detention pond/reservoir and treatment facility at the following three locations:

- Delta Reservoir (Phase 1),
- Santa Cruz Reservoir (Phase 2), and
- Carlton Barth Reservoir (Phase 3)

### Need

Hidalgo County's population is expected to increase 120% by 2070, creating a municipal water supply deficit that is projected to be roughly 171,000 Ac-ft. By reclaiming the storm water in the area, HCDD1 has found a new water source that can be sustainable and also mitigates the flood hazard for the most populated areas of the region. Even today, a reliable water source is needed during growing months,

### Benefits

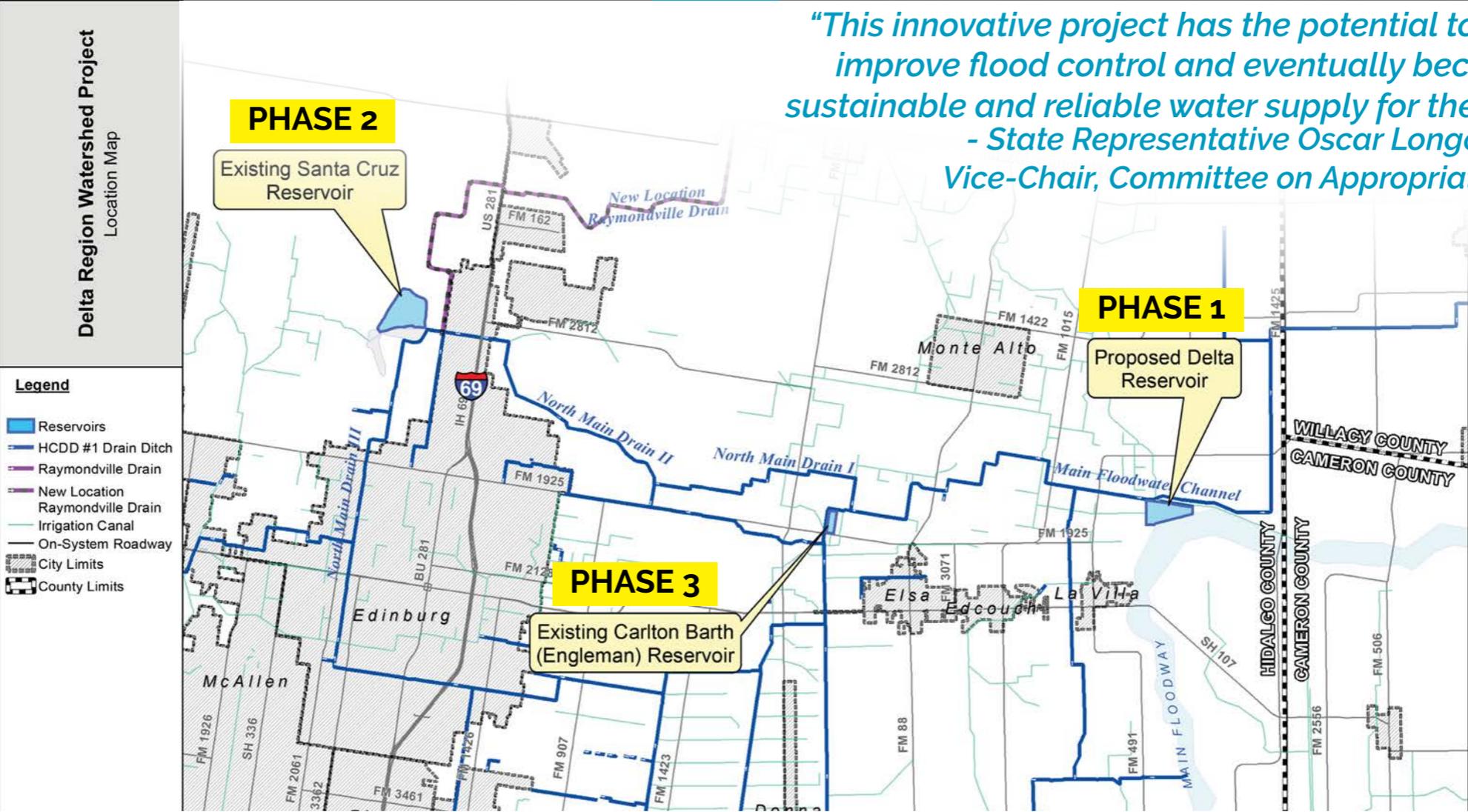
This project will:

- provide regional flood management for Hidalgo, Cameron and Willacy counties,
- provide increased flood protection to the most populated areas of Hidalgo County,
- increase the water supply to the region,
- provide enhanced water quality of Laguna Madre, and
- promote and support economic development in the region.

# LOCATION

## DELTA REGION WATER MANAGEMENT PROJECT

*"This innovative project has the potential to significantly improve flood control and eventually become a self-sustainable and reliable water supply for the entire region."*  
- State Representative Oscar Longoria  
Vice-Chair, Committee on Appropriations



# STATUS

## DELTA REGION WATER MANAGEMENT PROJECT

Texas Commission on Environmental Quality issued a Water Use Permit in 2016. A recommended project in the 2017 Texas State Water Plan by the Texas Water Development Board. HCDD1 is approved as a 'Wholesale Water Provider' by the Texas Water Development Board.



### Project Details



### Project Cost



### Partners



### Timeline



### Project Impact

#### Phase 1

**Component A:** Construction of a 224-acre reservoir and laterals that will serve as a flood control/detention facility. (In progress)

**Component B:** Water reclamation and distribution

#### \$103 million

Delta Reservoir - \$57M  
Carlton Barth (Engleman) - \$21 M  
Santa Cruz Reservoir - \$25 M

- HCDD1 has already contributed approximately \$5.8 million out of the \$10 million awarded from 2012 Drainage Bonds
- \$10 million from 2018 bond

#### Hidalgo County Willacy County

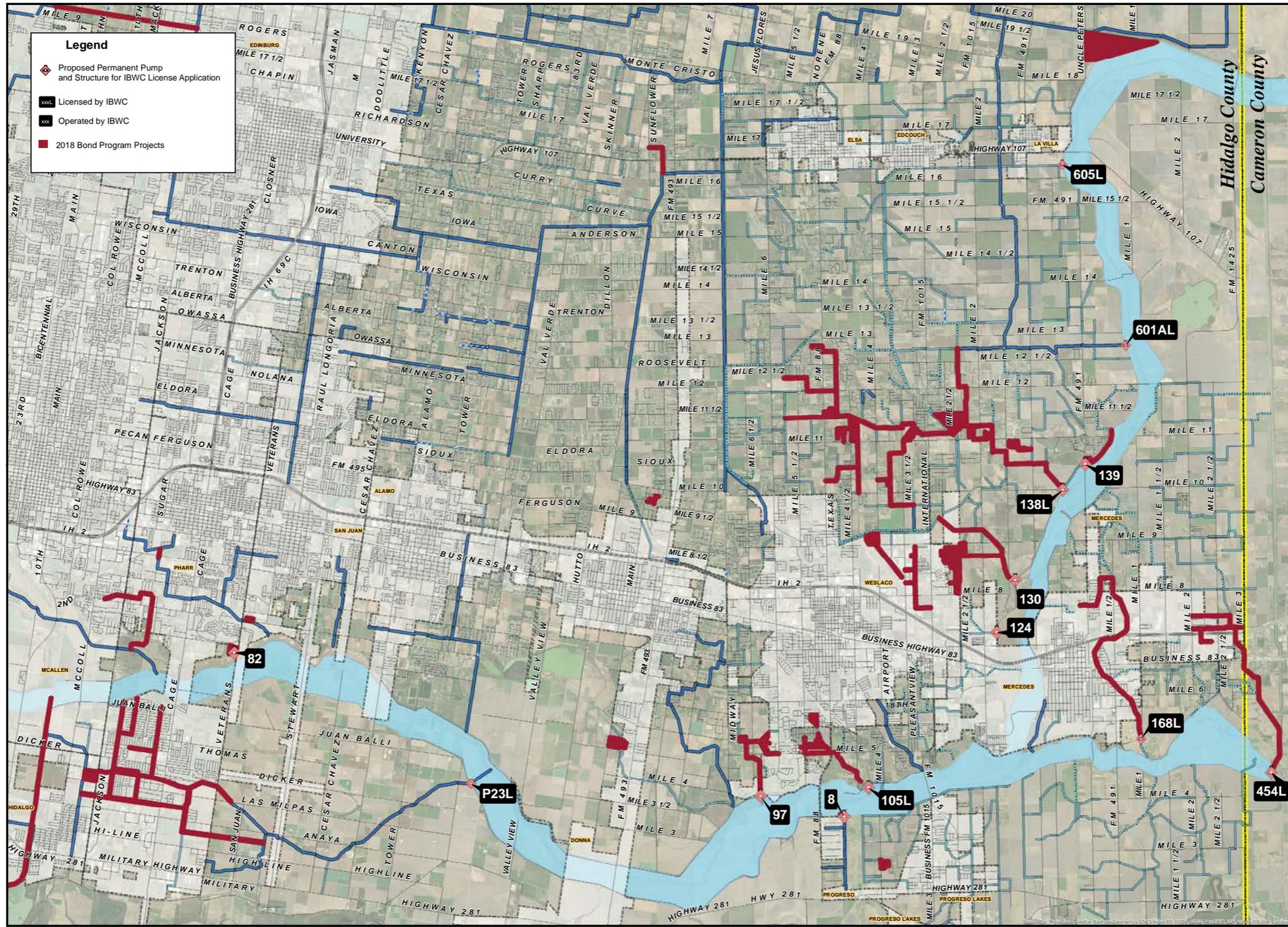
Texas Water Development Board  
Delta Lake Irrigation District  
Engleman Irrigation District  
Santa Cruz Irrigation District #15

#### Phase 1

Delta Reservoir Flood Control Project (Component A) - Began in October 2018 through in-house forces  
Delta Water Reclamation and Reuse (Component B) - Piloting and Water Assessment anticipated to begin June 2021

#### Flood Control & Water Supply

For Hidalgo, Cameron, and Willacy counties  
Phase 1, Component A removes over 2,150 structures from the 50-year floodplain



**Legend**

- Proposed Permanent Pump and Structure for IBWC License Application
- Licensed by IBWC
- Operated by IBWC
- 2018 Bond Program Projects

HIDALGO COUNTY  
DRAINAGE DISTRICT No. 1



Raul E. Sesin, P.E., C.F.M.  
General Manager  
Floodplain Administrator

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**PROPOSED PERMANENT PUMP AND STRUCTURE MAP AND STRUTURE MAP FOR IBWC LICENSE APPLICATIONS**



1 inch = 4,000 feet

# RECENT FLOOD EVENTS

## JUNE 2018, JUNE 2019, HURRICANE HANNA



# HIDALGO COUNTY

## RAIN EVENTS / HURRICANES

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Hidalgo County has seen an increase of rain events and their intensities. These rain events and hurricanes have impacted our communities. Properties have incurred major damage or have been destroyed. Floods are the most common natural disaster in the United States. It only takes an hour or two for torrential rains to cause nuisance or worse flooding in poor drainage locations across the Rio Grande Valley. Because floods result from many different circumstances, not all floods are equal in magnitude, duration, or effect. The large amount of rain produced by both Hurricane Dolly and Hanna required that we manage the gates at the Panchitas structure, which outfalls into the Laguna Madre.

- **2008, JULY 23 – HURRICANE DOLLY**

Rainfall: 6.77 in. – 12.00 in.

Frequency: 50-yr.



- **2018, JUNE 18 – GREAT JUNE FLOOD OF 2018**

Rainfall: 5.57 in. – 18.31 in.

Frequency: 500-yr.



- **2019, JUNE 24 – GREAT JUNE FLOOD, THE SEQUEL**

Rainfall: 1.38 in. – 15.20 in.

Frequency: 100-yr.



- **2020, JULY 25 – HURRICANE HANNA**

Rainfall: 6.53 in. – 15.49 in.

Frequency: 100-yr.



# THANK YOU

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Hidalgo County Precinct 1  
Commissioner David L. Fuentes