

Hidalgo County Drainage District No. 1
Raul E. Segin, PE, CFM
District General Manager
Hidalgo County Floodplain Administrator

2018 Drainage Bond Referendum Program

Flood Management

May 20, 2021





Hidalgo County Drainage District No. 1
BOARD OF DIRECTORS

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June 2018 Rain Event





Introduction

2018 Drainage Bond Program

The heavy rains of June 2018, produced the need for immediate funding to address areas in critical need of improved drainage. On November 6, 2018, \$190M were approved through a bond election to assist with this need. The proposed Hidalgo County countywide projects will help to protect more than 69,000 structures totaling over \$5.5 billion in property values. Thirty-seven (37) projects were funded by means of the bond election for a total of \$186,000,000. Machinery and equipment to perform maintenance and operations will be purchased with the remaining \$4,000,000. Contract execution with Engineering Consultants commenced in March 2019.

Summary of Contracts

- ❖ **Projects Contracted: 37**
- ❖ **Number of Actual Projects: 58**
- ❖ **Consultant Engineers: 18**
- ❖ **Machinery & Equipment: 1**
Purchases have not been made.
- ❖ **Projects Under Design: 23**
 - Precinct 1 – 8 projects
 - Precinct 2 – 10 projects
 - Precinct 3 – 2 projects
 - Precinct 4 – 3 projects
- ❖ **Projects Under Construction: 13**
 - Precinct 1 – 4 projects
 - Precinct 2 – 4 projects
 - Precinct 3 – 4 projects
 - Precinct 4 – 1 project
- ❖ **Projects Completed: 1**
 - Precinct 2 – 1 project





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



Project Area Number	Project Area
1	3 1/4 Mile Rd. & N. Bentsen Palm Dr.
2	3 3/4 Mile Rd. & Shuerbach Dr.
3	4 1/2 Mile Rd. & N. Doffing Rd.
4	4 Mile Rd. & Minnesota Rd.
5	5 1/2 Mile Rd. & N. Bentsen Palm Dr.
6	7 1/2 Mile Rd. & Glascock Rd.
7	7 1/2 Mile Rd. & Western Rd
8	Anaquitas
9	Delta Regional Reservoir
10	East Mercedes
11	Faysville Drain
12	FM 493 & Country Rd
13	Hidalgo Drain
14	Hwy 281 & FM 88
15	J-08 Drain
16	Jackson Rd. Drain
17	Las Milpas
18	Malone Dr & Pomelo Rd
19	Mid Valley Airport
20	Mile 10 N & Baseline Rd
21	Mile 10 N & Mile 1 W
22	Mile 11 N & FM 1015
23	Mile 11 N & Texas Blvd
24	Mile 9 N & FM 1015
25	Mission-McAllen Radio Alternate
26	Mission Lateral
27	Monte Cristo Rd. & Conway Rd.
28	Old La Blanca & Mile 10 N
29	PD-Lateral
30	Penitas Drain
31	Pharr-McAllen Drain
32	Raymondville Drain
33	South "I" Rd. Detention
34	South Lateral Drain
35	Southwest Weslaco
36	Sunflower Drain
37	Western Rd & 9 Mile Line

Legend

Bond Program 2018 Structures

Bond Program 2018

HCDD1 Boundary

HCDD1 Maintained

NOT Maintained

HCDD1 Owned

City Limits

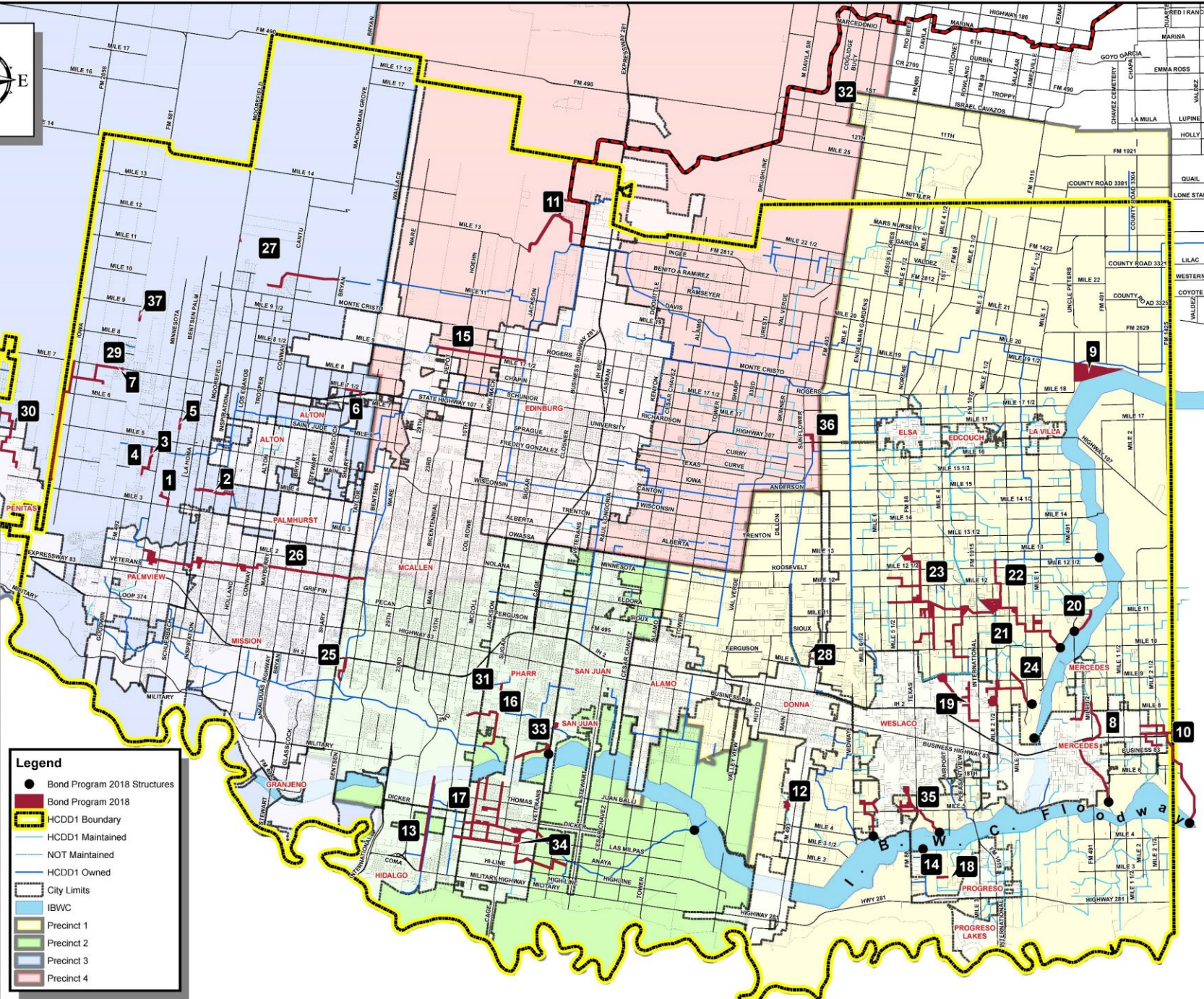
IBWC

Precinct 1

Precinct 2

Precinct 3

Precinct 4





Process

2018 Drainage Bond Program

Hydraulic & Hydrology (H&H) Model

Purpose: H&H studies are completed to ensure structures are sized correctly to handle floodwaters, while not inadvertently increasing flooding up or down stream. The studies are performed to quantify the volume flow rate of water draining from a watershed (i.e., drainage area) and determine the depth and velocity of flow and forces from flowing water on a surface or at hydraulic structures. H&H studies are essential to mitigate against flood loss in the future.

United States International Boundary & Water Commission (USIBWC)

- USIBWC considers environmental impacts of the proposed work and directly related construction.
- Outgrants are necessary for any work or event, including construction, dredging, recreational events, entertainment, or any other interest or request(s) resulting in the use of USIBWC federal real property by lease, easement, license, or permit.
- Six (6) resource agencies must environmentally clear a project for construction.

Resource Agencies

- ❖ Hidalgo County Historical Commission (HCHC)
- ❖ Texas Commission of Environmental Quality (TCEQ)
- ❖ Texas Historical Commission (THC)
- ❖ Texas Parks & Wildlife Department (TPWD)
- ❖ United States Army Corps of Engineers (USACE)
- ❖ United States Fish & Wildlife Services (USFWS)





Projects Requiring USIBWC Licensing / Permitting 2018 Drainage Bond Program

United States International Boundary & Water Commission (USIBWC)

- ❖ 11 Projects Require USIBWC Licensing / Permitting
 - 12 Licenses / Permits Needed

USIBWC El Paso | Reviewing for Licensure / Permitting (USIBWC ELP Received April 2021)

1. B-18-08 Anaquitas Drain
2. B-18-14 Hwy 281 & FM 88
3. B-18-21 Mile 10 North & Mile 1 West

USIBWC Mercedes | Preliminary Review

4. B-18-34 South Lateral (Pending THC Final Archeological Survey Report)

Pending Submittals to USIBWC Mercedes

5. B-18-20 Mile 10 North & Baseline Road (Pending THC Final Archeological Survey Report)
6. B-18-24 Mile 9 North & FM 1015 (Pending Signed & Sealed Plans)

Submitted to Resource Agencies for Environmental Clearance

7. B-18-33 South "I" Road

Pending Submittals to Resource Agencies

8. B-18-10A East Mercedes (Ditch 23)
9. B-18-19 Mid Valley Airport (Ditch 18B)
10. B-18-22 Mile 11 North & FM 1015 (South Mercedes Lateral)
11. B-18-35 Southwest Weslaco (Ditch 37)
12. B-18-35 Southwest Weslaco (Ditch 39)





The logo for Hidalgo County Precinct One is a circular emblem. It features a dark blue outer ring with the words "HIDALGO COUNTY" at the top and "PRECINCT ONE" at the bottom in white capital letters. Inside the ring is a white circle containing a blue silhouette of the state of Texas. A large white number "1" is superimposed on the Texas map. Small white stars are scattered around the inner circle.

then click on:

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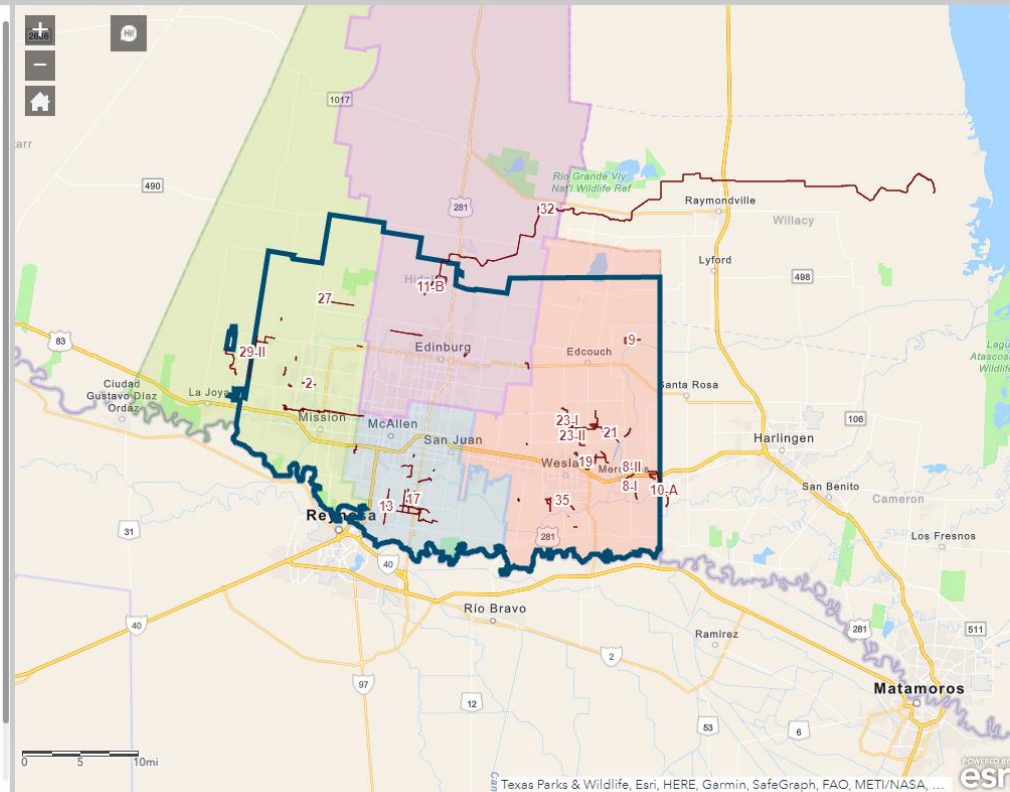
Hidalgo County Drainage District No. 1

Search for Address or Project

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▼ Enter Address or Project ID/Name

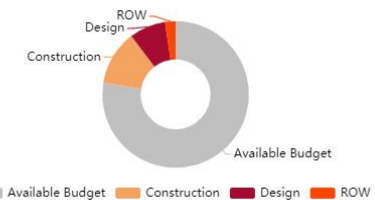
Show results within 3 Miles



2018 Drainage Bond Budget

\$ 190M

2018 Drainage Bond \$ Committed



2018 Drainage Bond \$ Committed by Precinct





In House Design & Construction Overview

Over the last five years, Hidalgo County Drainage District No. 1 has designed over 200 projects.

- 64 Completed
- 25 Under Design
- 24 Under Construction
- 104 Pending / On hold

Highlights

Ditch Widening: Approximate Average 160% Capacity Increase

- ❖ La Mesa – 0.3 miles
- ❖ Chaparral Drain – 3.56 miles
- ❖ Alamo Lateral – 4 miles
- ❖ Kenyon Road & Mile 17 – 2 miles
- ❖ Progreso Drains – 19.52 miles
- ❖ South Main Drain: SH 107 / FM 493 to Main Floodwater Channel – 4 miles
- ❖ Curry Drain – 2.62 miles

Regional Detention Facilities: Approximately 63.06 Acres

- ❖ La Mesa – 9.13 acres
- ❖ Chapa Las Brisas – 10.15 acres
- ❖ Progreso Drains – 43.78 acres

Structures

- ❖ Alamo Expressway Drain
 - 2 – 5'x5' boxes with gate structures
 - 2 – 12" mobile pumps
- ❖ Weslaco Drain
 - 1 – 10'x10' box with gate structure
 - 1 – 70 cfs pump

Crossings:

In three (3) years, Hidalgo County Drainage District No. 1 has completed the following:

- ❖ 17 crossings,
- ❖ 6 ditch widenings, and
- ❖ 9 crossings with ditch widening





In House Design La Mesa

Before



After





In House Design Chapa Las Brisas

Before



After



Questions & Answers Thank You!

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