International Boundary and Water Commission
United States Section

Dr. Maria-Elena Giner, Commissioner

Managing Water Along the U.S. – Mexico Border

Lower Rio Grande Citizens Forum
November 16, 2022


San Diego, CA Field Office


Nogales, AZ Field Office


Yuma, AZ Field Office


Upper Rio Grande Field Office


Amistad Dam Field Office


Lower Rio Grande Field Office

UNITED STATES POWER PLANT at Falcon Dam.

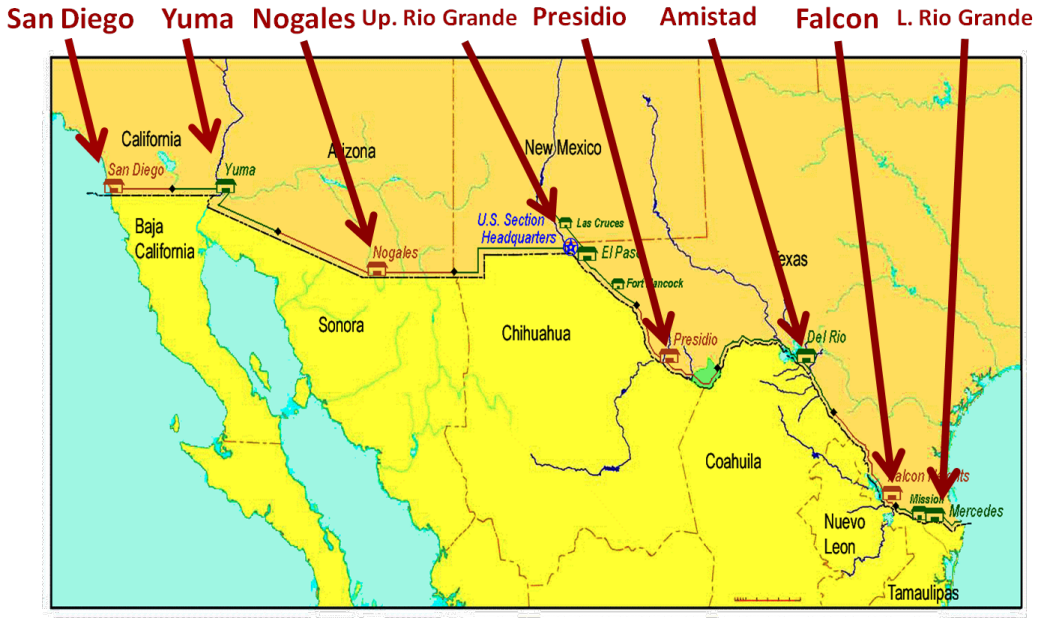
The International Boundary and Water Commission is responsible for **applying the boundary and water treaties** between the United States and Mexico. Our broad range of responsibilities include:

- **Flood Control**: More than 500 miles of levees and 34,900 acres of flood plain
- **Water Delivery**: Ensure compliance with the 1906 Convention and 1944 Water Treaty for the Rio Grande and Colorado River
- **Dams and Hydroelectric Power Plants:** Manage two international dams and five diversion dams
- **Sanitation:** Border sanitation with three international wastewater treatment plants
- **Boundary Demarcation**: 700 monuments and markers, 15 concrete jurisdictional markers, and 64 buoys for lake boundaries
- **Port of Entry:** Maintain 5 ports of entry

APPROPRIATED BUDGET

USIBWC staffing at 12 offices in the border region and Washington D.C.:

- 252 authorized positions
- USIBWC proposes restoring staffing to 313 personnel at an additional cost of $9 M
- 1/3 of employees at or near retirement age
- Approx. $50 M for salaries and expenses
- Approx. $50 M for construction



Fiscal Year	Appropriation			
	Salaries and Expenses	S&E Change	Construction	Cons Change
2013	$ 41,162,000	-	$ 27,619,000	-
2014	$ 44,000,000	6.89%	$ 33,438,000	21.07%
2015	$ 44,707,000	1.61%	$ 29,000,000	-13.27%
2016	$ 45,307,000	1.34%	$ 28,400,000	-2.07%
2017	$ 48,134,000	6.24%	$ 29,400,000	3.52%
2018	$ 48,134,000	0.00%	$ 29,400,000	0.00%
2019	$ 48,134,000	0.00%	$ 29,400,000	0.00%
2020	$ 48,170,000	0.07%	$ 36,900,000	25.51%
2021	$ 49,770,000	3.32%	$ 49,000,000	32.79%
2022	$ 51,970,000	4.42%	$ 51,030,000	4.14%

AGENCY NEEDS

Maintenance Challenges
Sediment Management Program
Flood Control
Other Unfunded Projects

Equipment on the levee

Levee rehabilitation

Amistad Dam

Maintenance Challenges

Estimated additional annual maintenance needs $22 M

- Flood control structures $7 M
- Sediment $12 M
- Levees $1 M
- Wastewater Treatment facilities $2 M

Extraordinary deferred maintenance: $487 M

- Mostly sediment 21 million cy $475 M

Removing sediment in Presidio, TX

Removing sediment in El Paso, TX

Sediment Management Program

Remove Sediment from the River Channel

- Protects residents from flooding (flood control mission)
- Water delivery to US and Mexico (water delivery mission)

Install New Sediment Basins

- Keeps sediment from reaching the river
- Easier to remove sediment year-round

Next Steps:

- Sediment Transport Study and Modeling contract
- Agreements with municipalities to install sediment control structures upstream of river
- Assessment of workforce, equipment, and supplies
- Increase Staffing and Equipment to maintain annual requirements
- Contract Extraordinary Deferred Maintenance

Flood Control Program

Rio Grande Flood Control Program $889 M is needed for 172 miles

High Priority – Due to FEMA accreditation for flood control protection in highly populated areas, levee failure, and rehabilitation of aquatic sites

- 24.2 miles of levees and levee gaps $105 M

Medium Priority – Based on value/benefit, complexity/constraints, and risk/safety

- 16.32 miles of levees and gaps $56 M

Low Priority – Based on value/benefit, complexity/constraints, and risk/safety

125.23 miles of levees and gaps $728 M

Tijuana River

- Tijuana River Levee Construction $40 M is needed for 3.77 miles

Levee Rehabilitation:

- Raising and rehabilitating levees to meet FEMA standards
- Communities with FEMA-accredited levees pay less for flood insurance
- $220+ million spent on region's levee projects since 2009

Other Unfunded Projects

- Safety of Dams: $200 M
- Facilities Renovation: $31 M is needed for 61 facilities
- Nogales Wastewater Treatment Plant: $6.0M
- Asset Management Plan: $10M

Amistad Dam - Del Rio, TX

Admin Building – Mercedes, TX

Tijuana River Levees – San Diego, CA

FUNDING TIMELINE

Feb. to May 2022: Identify Resource requirements and prepare budget justifications

→

May to Sep. 2022: Department of State (DOS) Review and Consultation Process

→

Sep 2022. to Jan. 2023: Office of Management and Budget (OMB) Review and Consultation Process

→

Feb. 6, 2023: OMB Submits President's Budget to Congress on the 1st Monday in February

Feb. 2023 to Sep. 30, 2023: Congressional Phase

→

Oct. 1, 2023: If Full-year Appropriations are not passed:

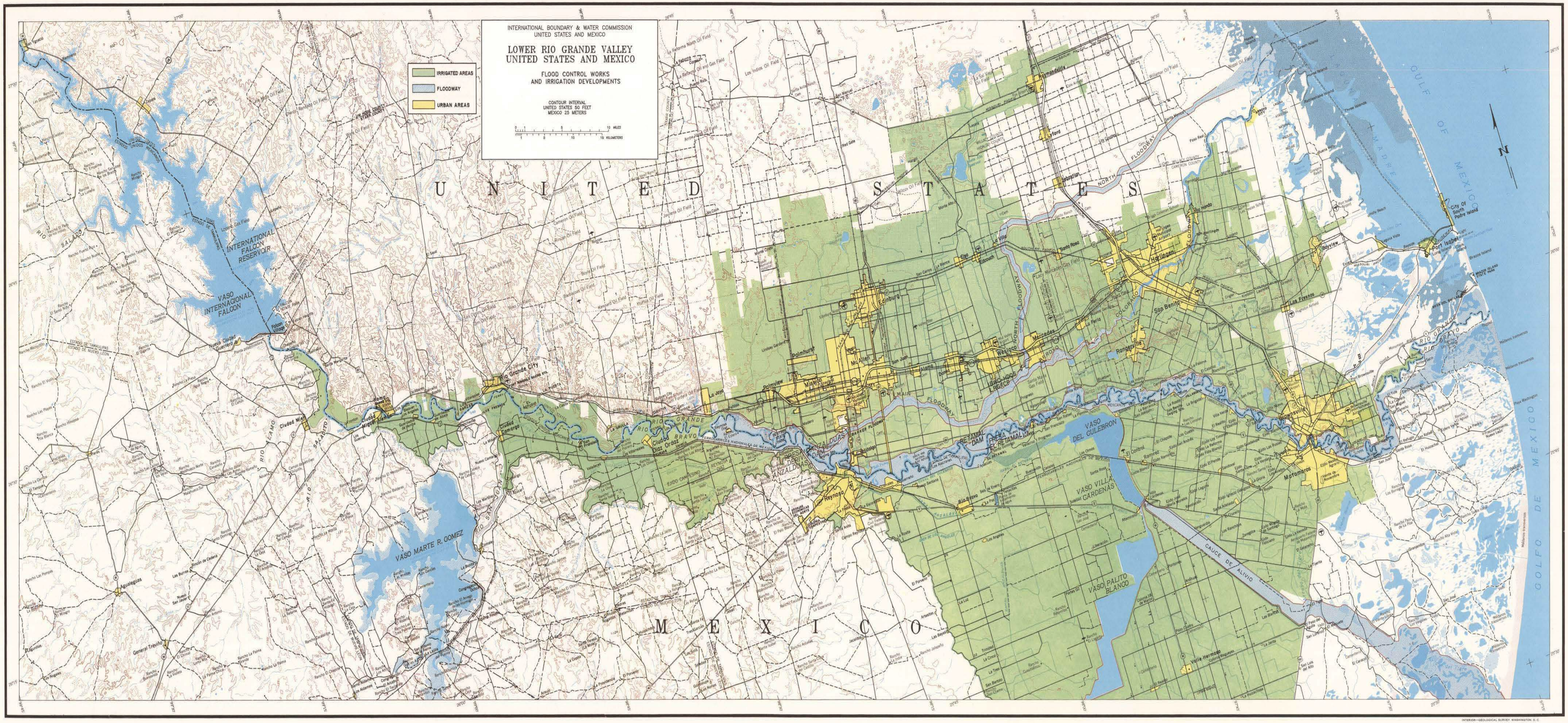
→

Congress issues a Continuing Appropriations Resolution (CR)

→

IBWC begins funding operations

FY2022-2023 RIO GRANDE AND FALCON DAM PROJECTS



2022 FUNDING FOR LOWER RIO GRANDE AND FALCON DAM BY PROGRAM

RIO GRANDE FLOOD CONTROL (RGF)

- Edinburg Design Build- $6.5M
- LRG Hydraulic Modeling- $1.6M

SAFETY OF DAMS (SOD)

- Falcon 45 Ton Spillway Crane Assessment and Rehab- $340 k

HEAVY EQUIPMENT REPLACEMENT (HER)

- Lower Rio Grande- $1M
- Falcon- $600 k

DEFERRED MAINTENANCE REQUIREMENTS (DMR)

- Falcon- $1.4M

2022 FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

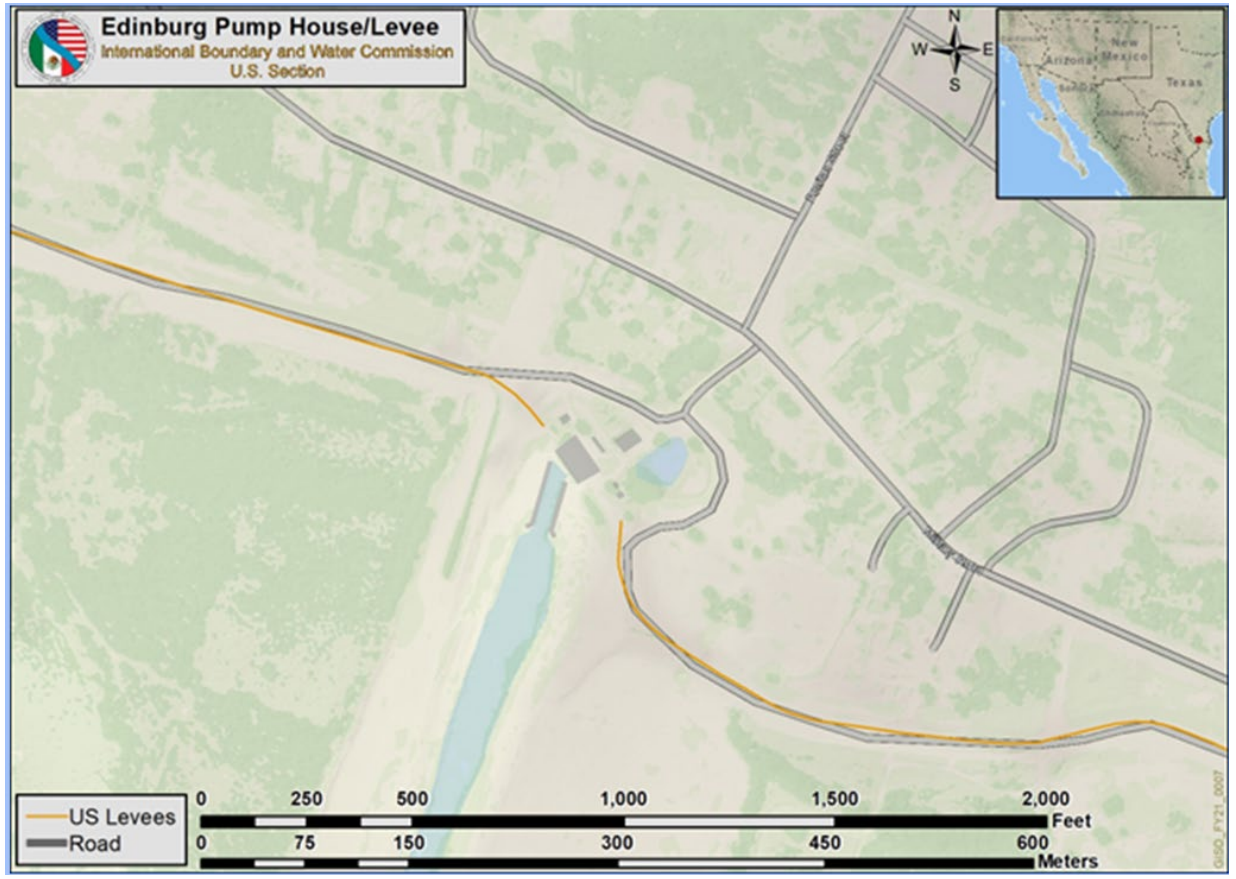
Edinburg Levee Design-Build- $6.5M

Description: Located near Peñitas, Texas in Hidalgo County. The project consists of the design and construction of approximately 800 linear feet of levee improvements.

Awarded: December 23, 2021, to Conti Federal Service, LCC.

Estimated Completion Date: Spring 2025.

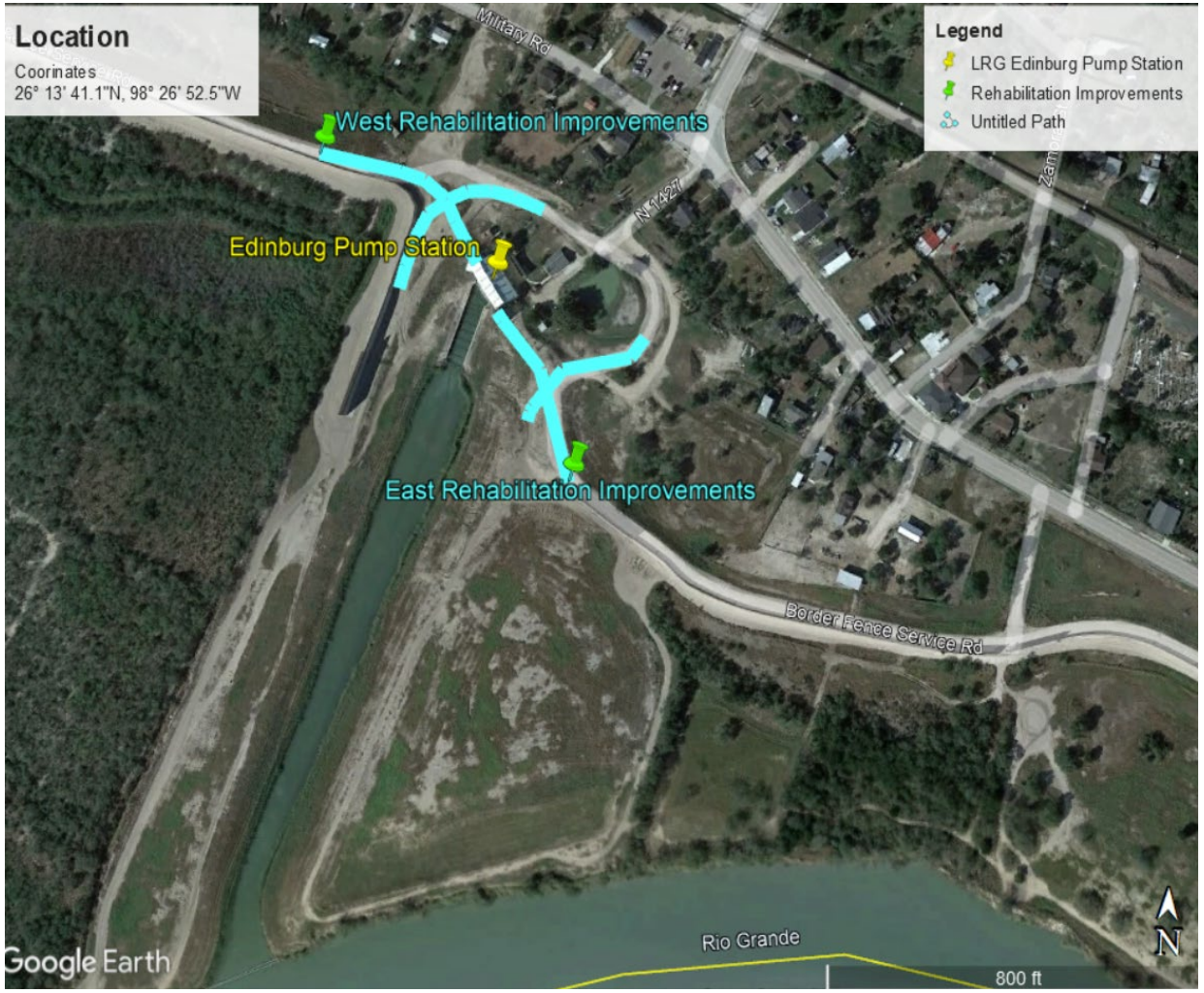
Project Work: The major construction features include levee construction, construction of floodwalls, replacing an existing gate well structure, and the construction of levee ramps.



Edinburg Levee Design-Build

The new levee must tie-in to the floodwall constructed by Hidalgo County Irrigation District No. 1 (HCID1) between the Edinburg Pump Station and USIBWC's levee.

The irrigation districts the USIBWC is coordinating is the Hidalgo County Irrigation District #1 on all aspects of design and construction.



2022 FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

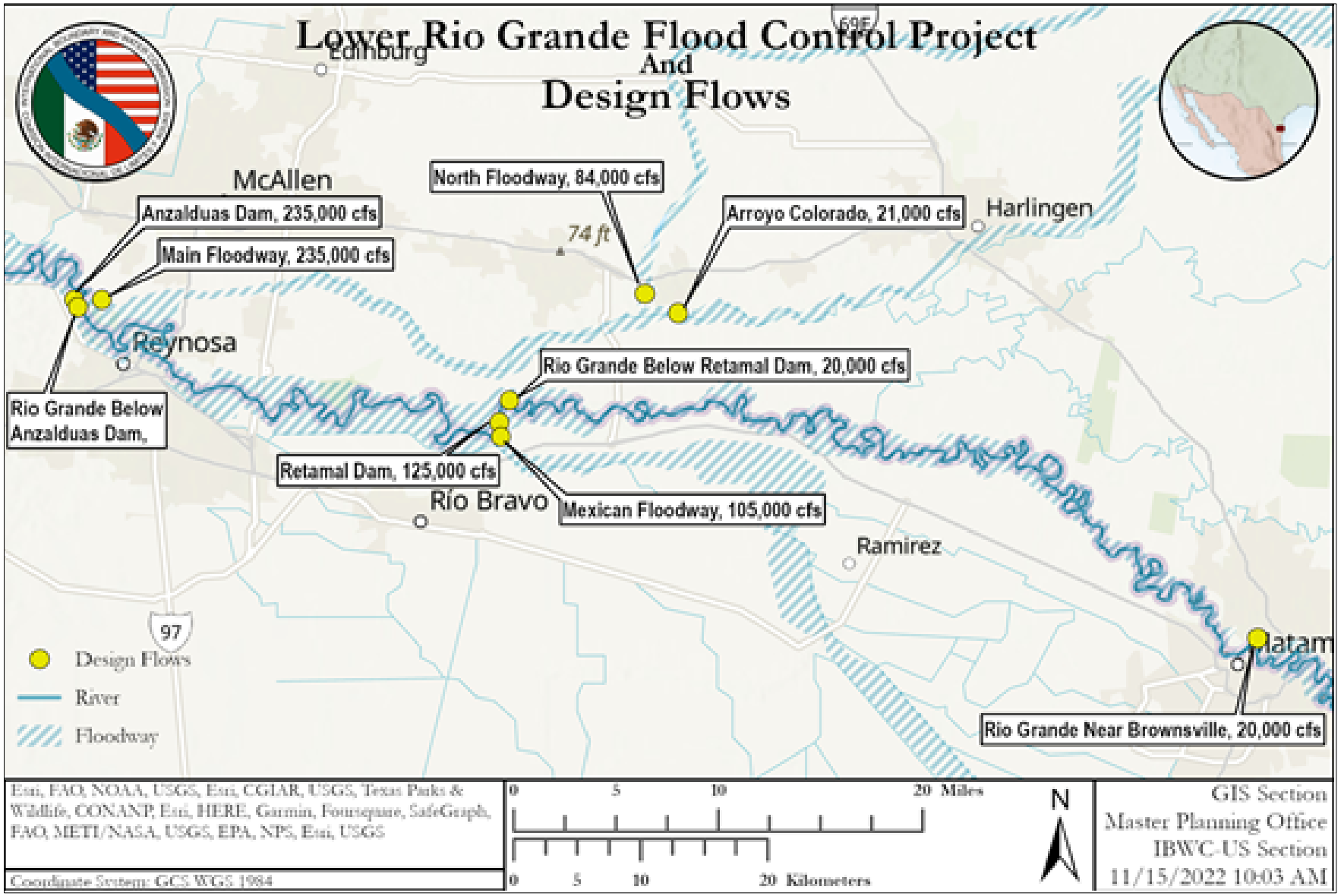
LRG Hydraulic Modeling- $1.6M (RGF)

Description: Located in the Hidalgo, Cameron and Willacy Counties, Texas.

Awarded: August 8, 2022, to Stantec Consulting Services Inc.

Estimated Completion Date: Summer 2024.

Project Work: Hydraulic models for the U.S. Interior Floodways of the Lower Rio Grande Flood Control Project (LRGFCP)—Main Floodway, North Floodway and Arroyo Colorado reaches.

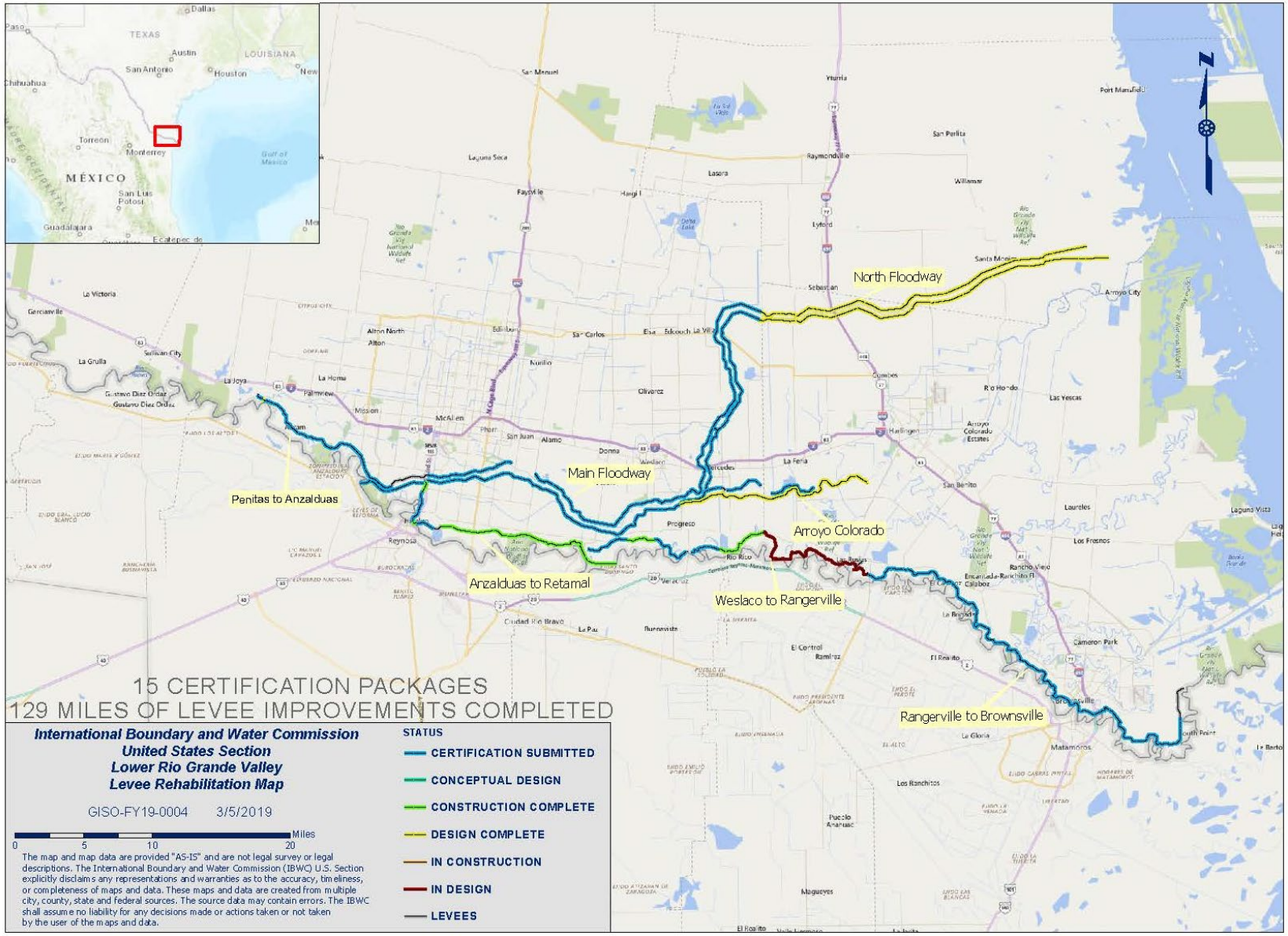


2022 FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

LRG Hydraulic Modeling

Cross section surveys, hydraulic modeling and analysis of the flow split will be conducted to develop floodplain maps.

Sediment volume accumulations and their impact on flow capacity and levee freeboard will be analyzed, and then identify actions required to correct deficiencies.



2022 FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

Falcon 45 Ton Spillway Crane Assessment and Rehab- $340 k

Awarded: Spring 2022

2022 FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

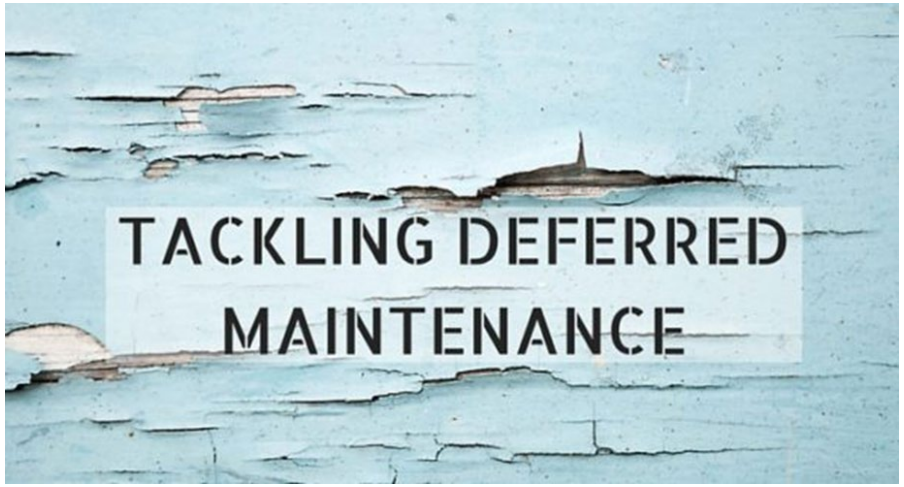
Heavy Equipment Replacement

Lower Rio Grande- $1M

Falcon- $600 k

Deferred Maintenance Requirements

Falcon (Spillway Gate's Lubrication, Dam Water Treatment Plant Motor Control Center and Falcon Village Elevated Water Tank) - $1.4M



2023 EXPECTED FUNDING FOR LOWER RIO GRANDE AND FALCON DAM BY PROGRAMS

RIO GRANDE FLOOD CONTROL PROGRAM (RGF)

- Edinburg CMS $1.3M
- Upper Brownsville Levee Construction+CMS- $10.5M
- Mercedes Pump to Levee Gap Construction+ CMS- $9M

SAFETY OF DAMS (SOD)

- Falcon Dam Spillway Expansion Joint Repairs- $400k

FACILITIES RENOVATION PROGRAM (FRP)

- Mercedes Admin Building + CMS- $5.9M

HEAVY EQUIPMENT REPLACEMENT (HER)

- Falcon- $600 k
- Upper Rio Grande- $300 k

DEFERRED MAINTENANCE REPAIRS (DMR)

- Falcon- $350k
- Lower Rio Grande- $100 k

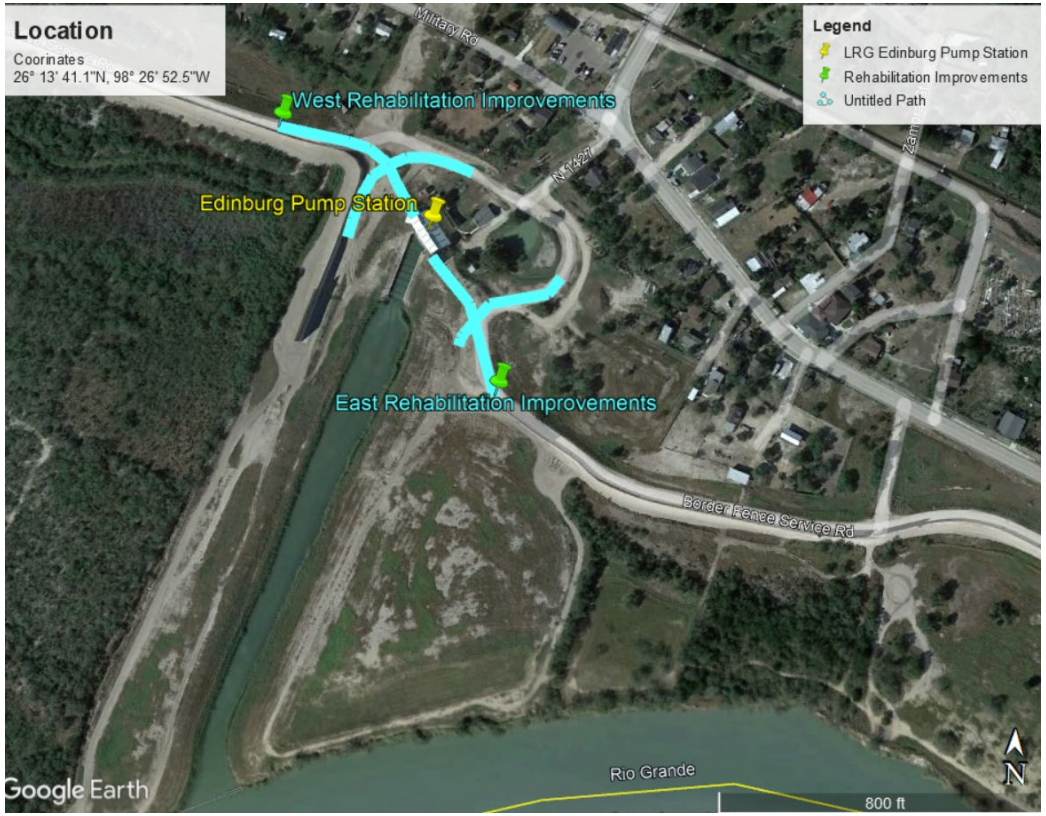
CRITICAL INFRASTRUCTURE PROTECTION (CIP)

- Falcon Installation of Fiber Optic- $1.8M
- Falcon Security System Upgrade- $1.1M

2023 EXPECTED FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

Edinburg Construction Management Services - $1.3M

Planned to be awarded by the 3rd QTR.

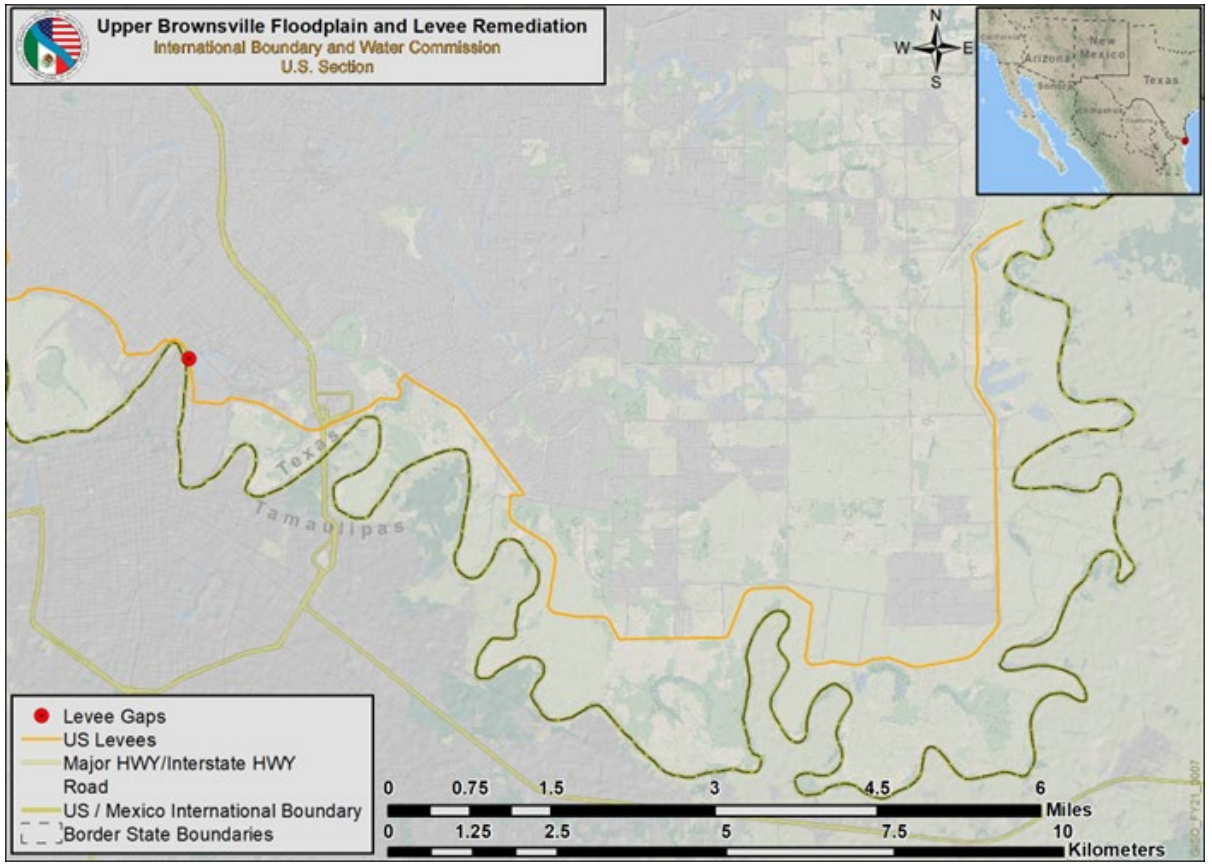


2023 EXPECTED FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

Upper Brownsville Levee and Floodplain Remediation
Construction + CMS - $10.5M

Description: The project location is at the Gateway International Bridge in Brownsville, Cameron County, Texas. The proposed levee stabilization improvements extend from 400 feet upstream of the bridge to 885 feet downstream of the bridge.

Project Work: This project will address the current levee failure downstream of the Gateway International Bridge. A combination of shear panels to arrest the levee failure and stone columns to arrest the riverbank slope. Seventy-two (72) soil mix columns are proposed along the levee and thirty-six (36) stone columns along the floodplain near the riverbank.

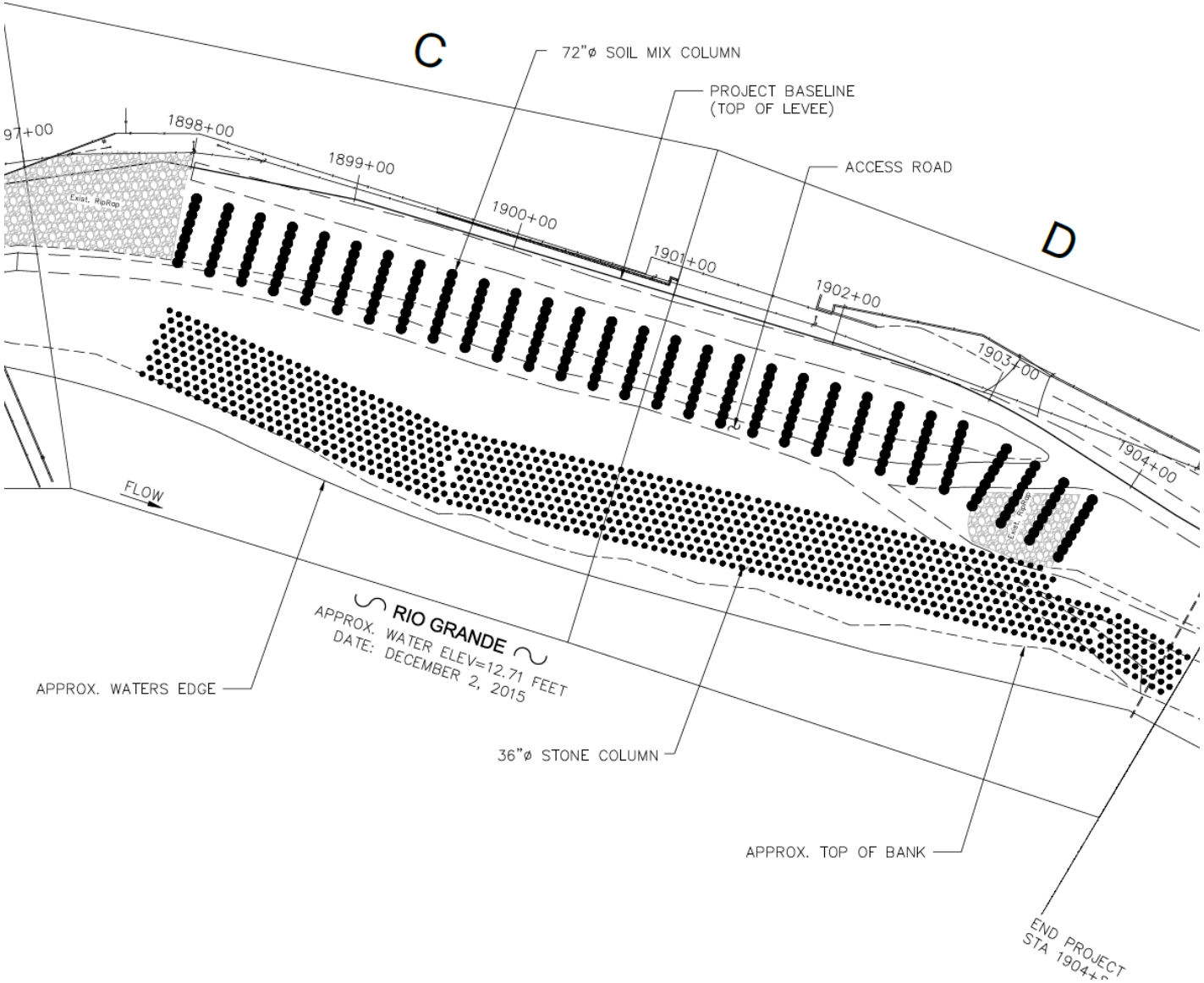


2023 EXPECTED FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

Upper Brownsville Levee and Floodplain Remediation Construction + CMS

The project is to stabilize the levee slope and floodplain to meet the USIBWC and USACE standards and FEMA levee accreditation requirements.

The proposed improvements in the design consist of installing soil mix columns and stone columns to stabilize the slope on both the levee structure and the floodplain segment.

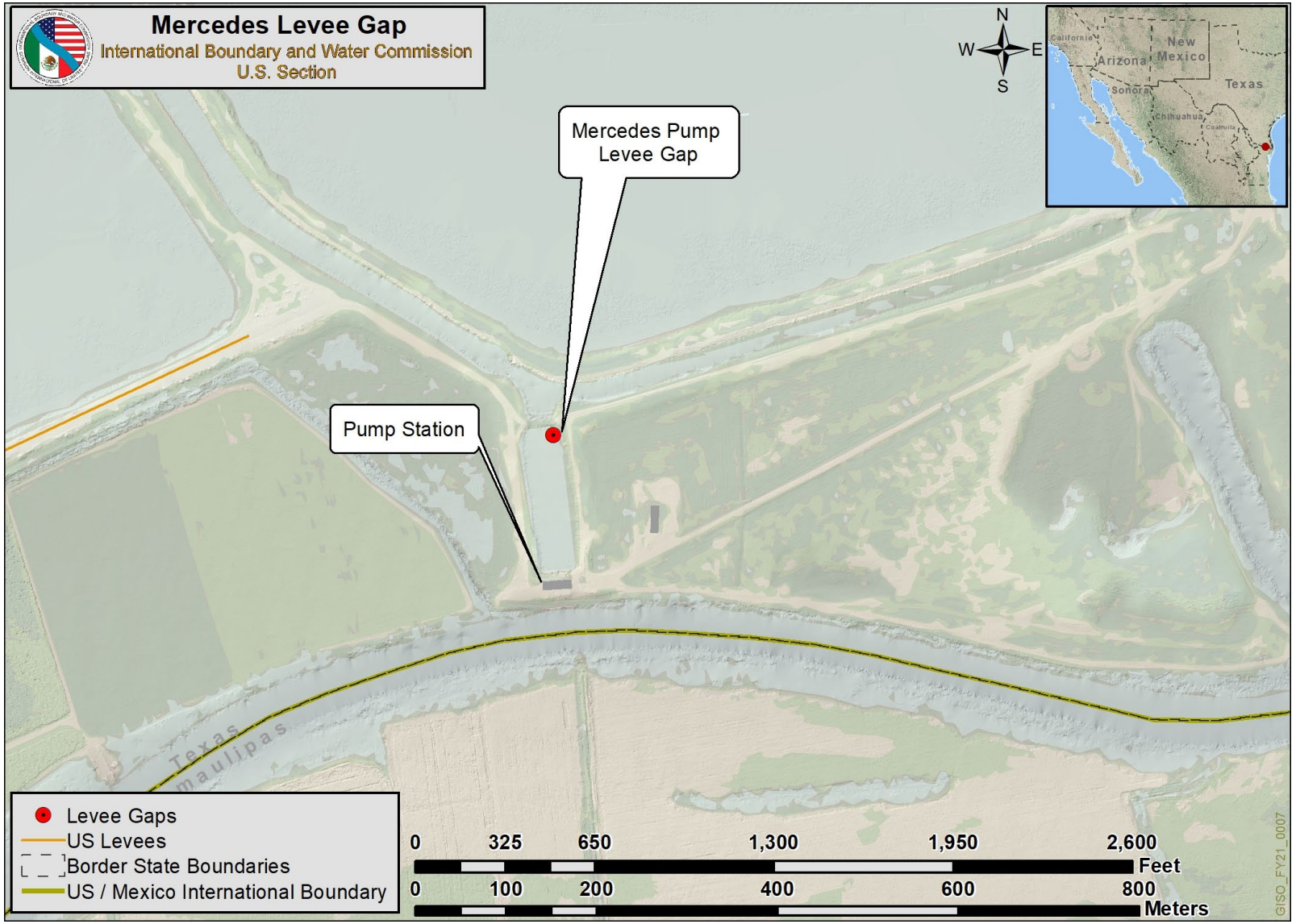


2023 EXPECTED FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

Mercedes Pump to Levee Gap Construction +CMS - $9M

Description: The work is in Hidalgo County, Texas. Hidalgo and Cameron County Water Improvement District #9.

Project Work: The work for this project consists of construction of gated structures and retaining walls supported on deep foundations and small segments of levee to complete closure of the levee gap. The final product will complete closure of the gaps in the levees while allowing passage of required flows through the levee for the local irrigation districts.



2023 EXPECTED FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

Falcon Dam Spillway Expansion Joint Repairs - $400 k

Description: The Spillway is an enormous structure and the most prominent feature of the Falcon Dam. Six large gates (50' X 50' each) sit atop of the 1,300 feet-long spillway chute capable of a discharge capacity of 456,000 cfs. The plant lines running along the longitudinal expansion joints are indicative of potential seepage points.

2023 EXPECTED FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

Falcon Dam Spillway Expansion Joint Repairs - $400 k

Project Work: Significant spalling exists on some spillway slabs. Also, there is a possibility that voids exist directly beneath the concrete slabs.

These expansion joints will require a complete replacement. Ground-Penetrating Radar assessment along with LIDAR imaging will be conducted. Movement of the spillway walls is another concern, so survey pins and monitoring movements of wall sections will be placed. A monitoring plan will provide information on the rate of wall migrations.

2023 EXPECTED FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

Mercedes Admin Building + CMS - $5.9M

Description: This field office is located 32 miles northwest of Brownsville, Texas in Hidalgo County at Mercedes, Texas. The facility is a metal building that was constructed in 1979. It has many deficiencies, which include insufficient workspace, lack of handicap accessibility, and the deteriorated condition of interior rooms, doors and windows, roof, and electrical, HVAC, and plumbing.

Project Work: To replace the administration building with an adequately sized facility that meets current building code requirements at the Mercedes Field Office.

2023 EXPECTED FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

Heavy Equipment Replacement (HER)

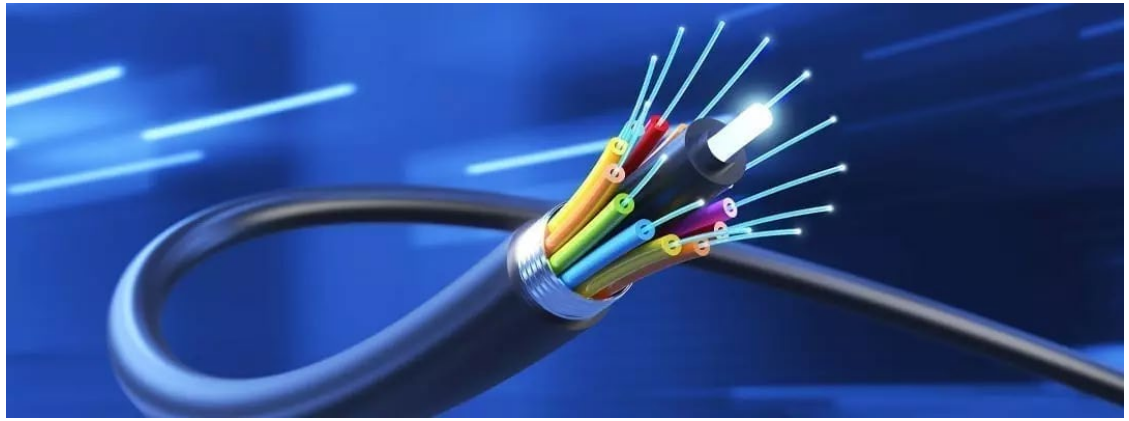
- Falcon- $600 k
- Lower Rio Grande- $270 k

Deferred Maintenance Repairs (DMR)

- Falcon (re-roofing houses, electromechanical brakes maintenance, gate platforms maintenance, lifting beam replacement, pipe rails concrete repairs)- $350 k
- Lower Rio Grande (Mercedes building roof replacement)- $100 k

2023 EXPECTED FUNDING FOR LOWER RIO GRANDE AND FALCON DAM

Falcon Installation of Fiber Optic - $1.8M



Falcon Security System Upgrade - $1.1M

UNFUNDED PROJECTS IN THE LOWER RIO GRANDE AND FALCON DAM

RIO GRANDE FLOOD CONTROL

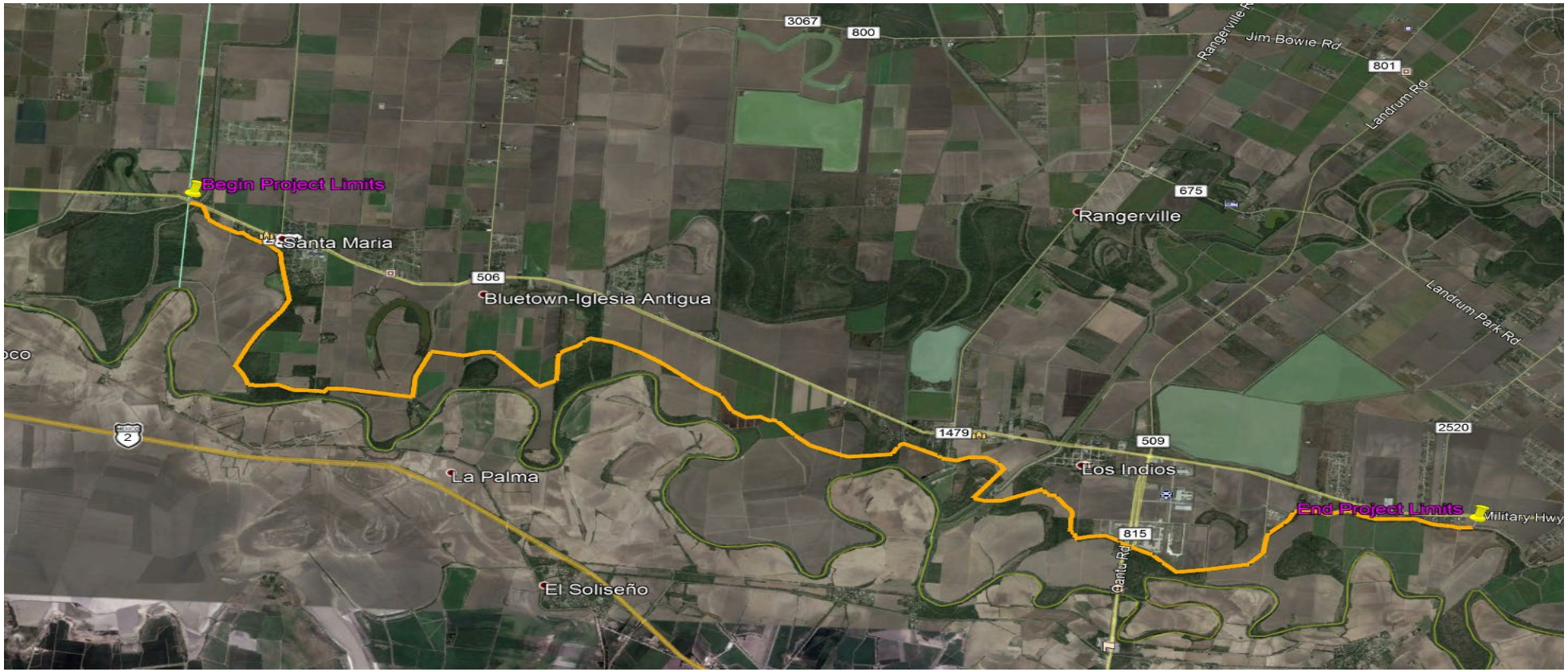
- Santa Maria Reach 2-12.5 mi. $28M
- Levee Gaps (12).7 mi- $70M
- Mission United Irrigation District (UID) Canal- $28.4M
- North Floodway (North and South)65 mi.- $370M
- Arroyo Colorado (South) 16.2 mi.- $54M

UNFUNDED PROJECTS IN THE LOWER RIO GRANDE AND FALCON DAM

Santa Maria Reach II -12.5 mi. $28M

Description: This levee rehab project is situated entirely in Cameron County and extends along the Rio Grande from the Hidalgo/Cameron County Line to Los Indios, Texas.

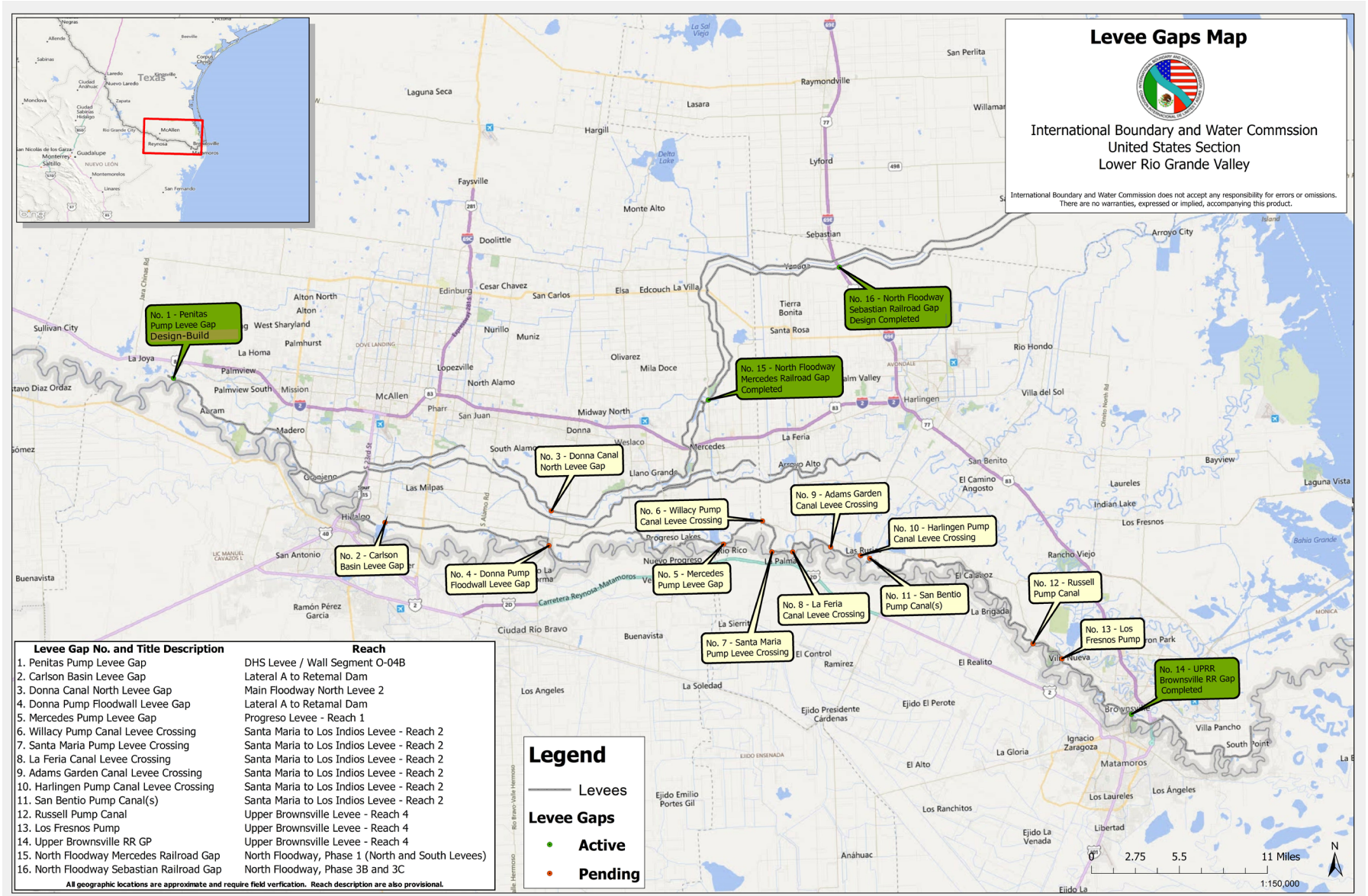
Project Work: The purpose of this project is to address seepage deficiencies on approximately 12.5 mi. of the levee which provides flood protection to the southern Texas communities of Santa Maria, Iglesia Antigua, Bluetown, and Upper Los Indios.



UNFUNDED PROJECTS IN THE LOWER RIO GRANDE AND FALCON DAM

Levee Gaps construction + CMS (12 pending) $70M

During the construction of the levee segments within the Lower Rio Grande Flood Control Project (LRGFCP), work could not be completed at locations such as railroad crossing of levees and intakes to irrigation canals. These levee gaps are being closed individually or as part of work on remaining levee segments. The levee gap closures are required for the levee systems to meet the 44 CFR 65.10 standards for FEMA levee accreditation.



UNFUNDED PROJECTS IN THE LOWER RIO GRANDE AND FALCON DAM

Mision United Irrigation District Canal - 2.9 mi. - $28.4M

Description: This segment of levee is part of the Lower Rio Grande Flood Control System in southern
Texas. The project is located adjacent to the Rio Grande and is positioned south of Palmview South in Hidalgo County, Texas. The project site may be accessed from U.S. Highway 83 East and East Loop 374, via Inspiration Road.

Project Work: The purpose of this project is to address levee slope erosion and reestablish a maintenance road that was removed when the levee was raised and widened on top of the maintenance road. This segment of levee is 2.9 miles in length and protects the city of Palmview South in Hidalgo County, Texas.

UNFUNDED PROJECTS IN THE LOWER RIO GRANDE AND FALCON DAM

North Floodway 65 mi.- $370M

Project Description: Initially, the North Floodway was constructed in late 1939 and early 1940 to provide controlled discharge release of the Rio Grande River near Donna, Texas to relieve flooding in the City of Brownsville, Texas, United States and Matamoros, Mexico. In 2006, FEMA decertified the United States Section of the IBWC levees in the LRGFCP. Since the levees no longer meet FEMA criteria, this levee needs to be redone.

Project Purpose: To rehabilitate the levees at the north and south levee reaches in order to permit levee accreditation by the U.S. Federal Emergency Management Agency ("FEMA"). The project includes the design, construction and certification of the levee to withstand the 100-year flood with +3 ft of freeboard per 44 CFR for FEMA certification.

Project Location: The project is located within Hidalgo, Cameron, and Willacy Counties in Texas, Approximately 6 miles north of Harlingen Texas.

Arroyo Colorado (South Levee) 16.2 mi.- $54M

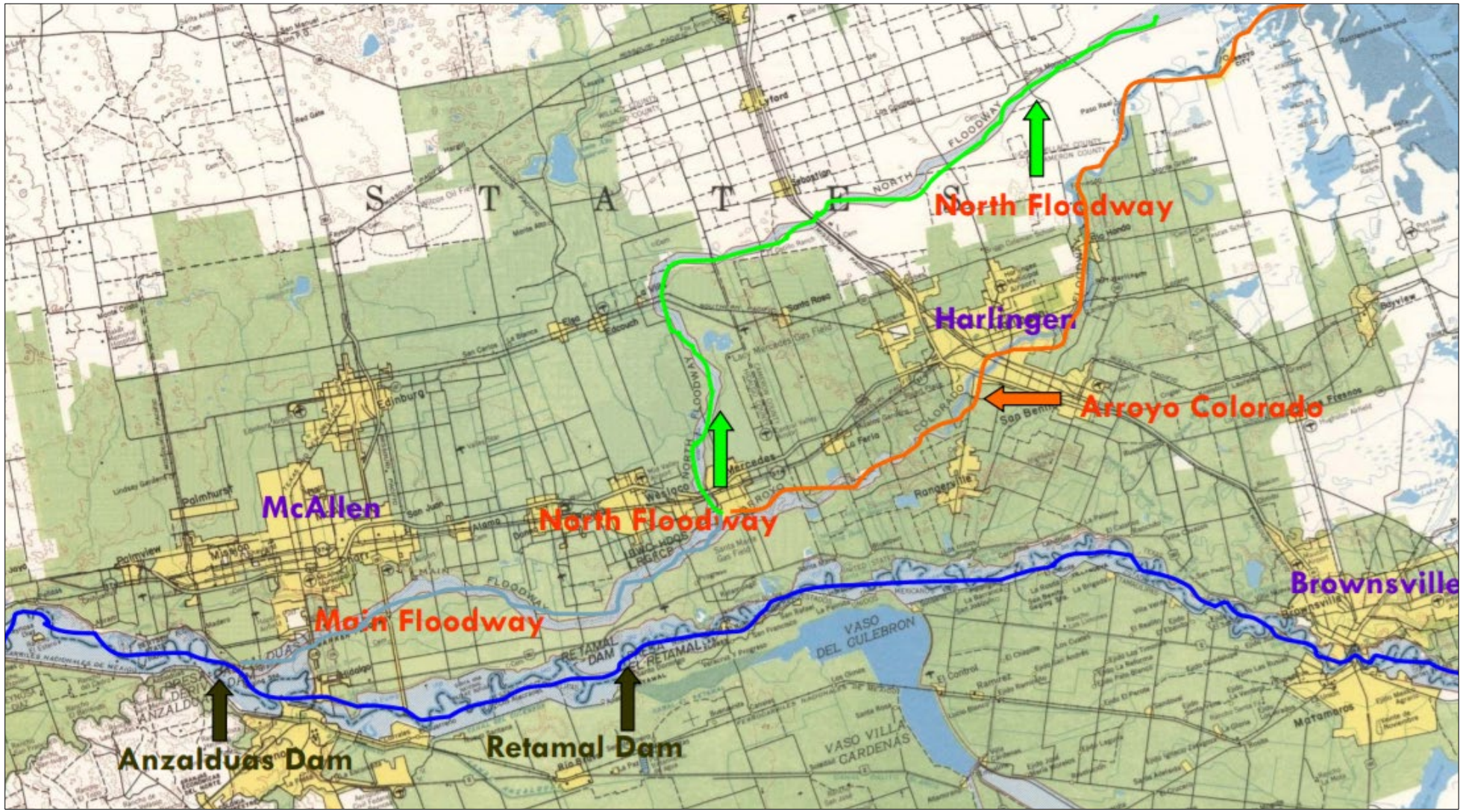
Project Description: This is an interior floodway in the Lower Rio Grande Valley whose levees are maintained by the United States Section of the International Boundary and Water Commission (USIBWC). The existing levee was designed to protect the existing farmlands and commercial/residential buildings against the 100-year flood event.

Project Purpose: To rehabilitate and improve the existing levee at Arroyo Colorado South Levee to include raising the existing levee to a minimum elevation to permit levee accreditation by the U.S. Federal Emergency Management Agency ("FEMA") the project includes the design and certification of the levee on the Rio Grande to withstand the 100-year and flood with +3 ft of freeboard per 44 CFR for FEMA certification.

Project Location The project site is in Hidalgo and Cameron Counties, Texas along the Arroyo Colorado that extends from FM 1015 to Palm Boulevard.

UNFUNDED PROJECTS IN THE LOWER RIO GRANDE AND FALCON DAM

North Floodway and Arroyo Colorado Projects



Questions and Discussion

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