

International Boundary and Water Commission United States Section

For immediate release July 23, 2024

USIBWC to present research on Rio Grande hydrology at August 6 Lower Rio Grande Citizens Forum Public Meeting

Dr. Maria-Elena Giner, P.E., Commissioner of the U.S. Section of the International Boundary and Water Commission (USIBWC), and USIBWC Hydrologist Delbert Humberson will discuss research the agency has done on Rio Grande hydrology at the Lower Rio Grande Citizens Forum in-person and virtual public meeting on Tuesday, August 6, 2024, from 1:30 p.m.-3:30 p.m. CDT.

The USIBWC has begun sharing this information with congressional representatives and other stakeholders to encourage a regional discussion on building resiliency in the region with less dependence on Mexico's water.

"I believe it is important that local stakeholders understand the impact drought has on the reduction of inflows from U.S. rivers and unmeasured tributaries," Commissioner Giner said. "This is water that is no longer reaching the river and is not part of Mexico's treaty deliveries."

Joseph Tritz, Maintenance Supervisor for the USIBWC Mercedes Field Office, will give an update on field office activities. He will cover the role and responsibilities of the field office's maintenance and operations department.

The public meeting will be held in person at:

USIBWC Mercedes Field Office 325 Golf Course Road Mercedes, TX 78570

The public meeting will also be held virtually. <u>Click here to join the meeting</u>. If possible, it may be helpful for you to test connectivity on your own prior to the meeting by clicking on the "Join" link and ensuring your camera and microphone are functioning. Or join by phone: Call-in number +1 872-240-1286 Phone conference ID: 689 870 253#

For those connecting via phone, the presentations will be available before the start of the meeting. Go to the Lower Rio Grande Citizens Forum page https://bit.ly/3MVCpyV and look for the links for the 4/2/2024 meeting.

If you would like to speak during the public comment period, please sign up ahead of time by contacting Frank Fisher at frank.fisher@ibwc.gov or 915-494-6027 by noon on August 2, 2024.

News Media Contacts: Frank Fisher frank.fisher@ibwc.gov 915-494-6027

LOWER RIO GRANDE CITIZENS FORUM Tuesday, August 6, 2024, from 1:30 p.m.-3:30 p.m. CDT.

IBWC Mercedes Field Office 325 Golf Course Road Mercedes, TX 78570

And Via Teams

Agenda

- Welcome and Introductions Co-chairs
- Hydrology of the Rio Grande, Water Deliveries, and the Minute Status Dr. Maria-Elena Giner, P.E., USIBWC Commissioner, Hydrologist Delbert Humberson
- Mercedes Field Office Activities Joseph Tritz, Field Office Maintenance Supervisor
- Public Comment
- Board Discussion
- Suggested Future Agenda Items

If you have a disability that you wish to self-identify confidentially that requires accommodation, please advise us ahead of time. For more information call Frank Fisher at frank.fisher@ibwc.gov or 915-494-6027.

Microsoft Teams meeting

Join on your computer, mobile app or room device: Click here to join the meeting

Meeting ID: 291 402 026 584 Passcode: RY5aNB

Download Teams | Join on the web

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+1 872-240-1286,,689870253#

Phone conference ID: 689 870 253#



INTERNATIONAL BOUNDARY AND WATER COMMISSION

UNITED STATES SECTION

Update on Hydrology of the Rio Grande, Water Deliveries, and Minute Status

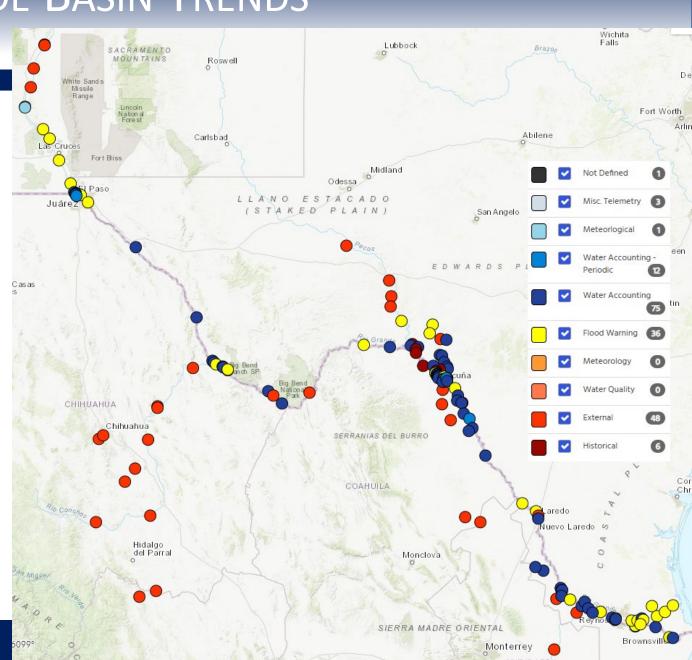
Dr. Maria-Elena Giner, P.E. Commissioner U.S. Section

Adrian Cortez - Lead Hydrologist Delbert Humberson - Hydrologist



RIO GRANDE BASIN TRENDS

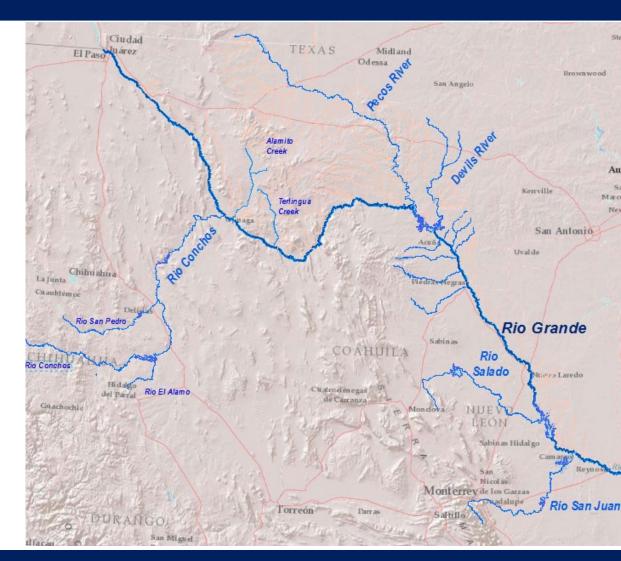
- Commission Binational Stream Gage Program (1930s)
- Water Accounting Program (1950s)
 - Total Volume of Inflow for U.S. & Mexico
 - Archival of Inflow Ownerships Began in 1981
 - River Evaporative Losses
- Where is our water coming from?





AMISTAD DAM AND RESERVOIR

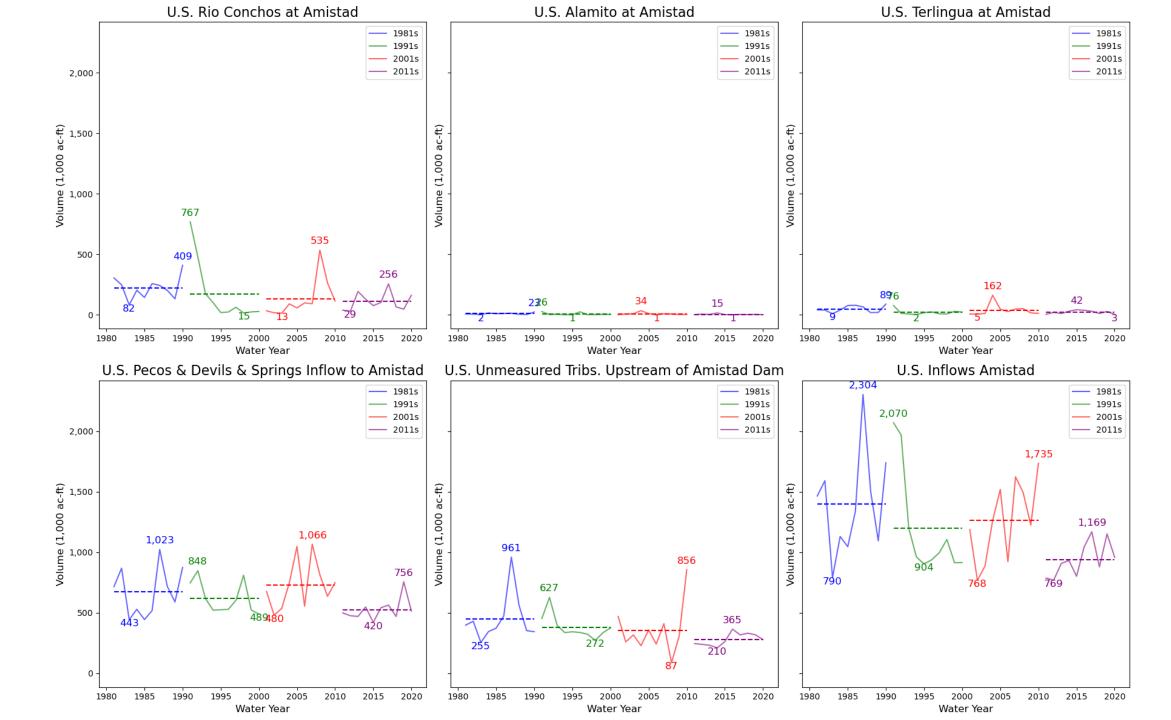
- U.S. Inflows into Amistad Reservoir
 - Rio Conchos (One-third or Minute 234)
 - o Terlingua & Alamito Creeks
 - Pecos and Devils Rivers
 - Goodenough Springs
 - 50% of any other flows not otherwise allotted. (Runoff)





SUMMARY OF APPROACH

- What we know.
 - Total inflows assigned to each country
 - Ultimately this is what gets allocated to users
- What we are estimating.
 - How much came from Conchos or Terlingua, Pecos or Unmeasured Run-off
 - Tracking it down the river





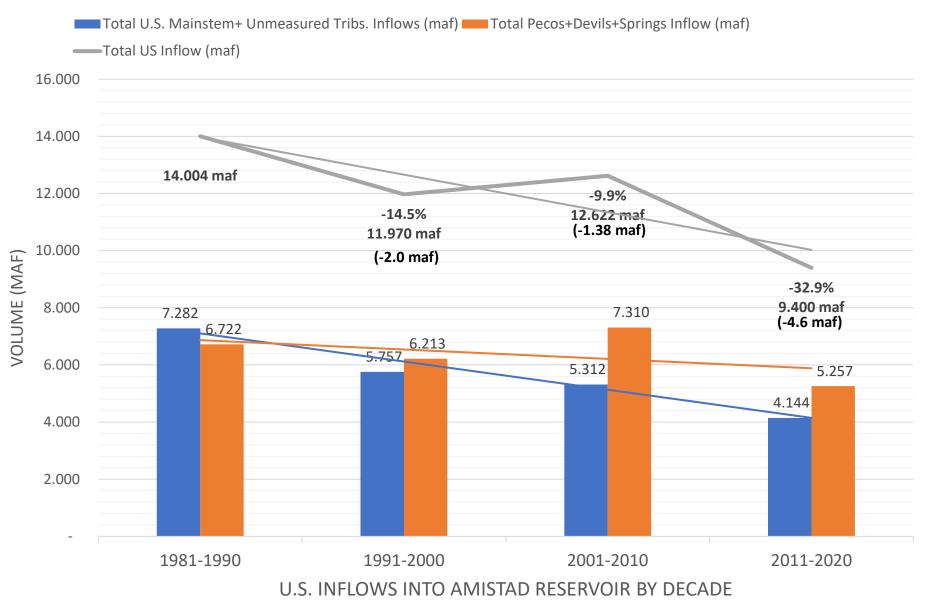
Last 10 – Compared to 2000s

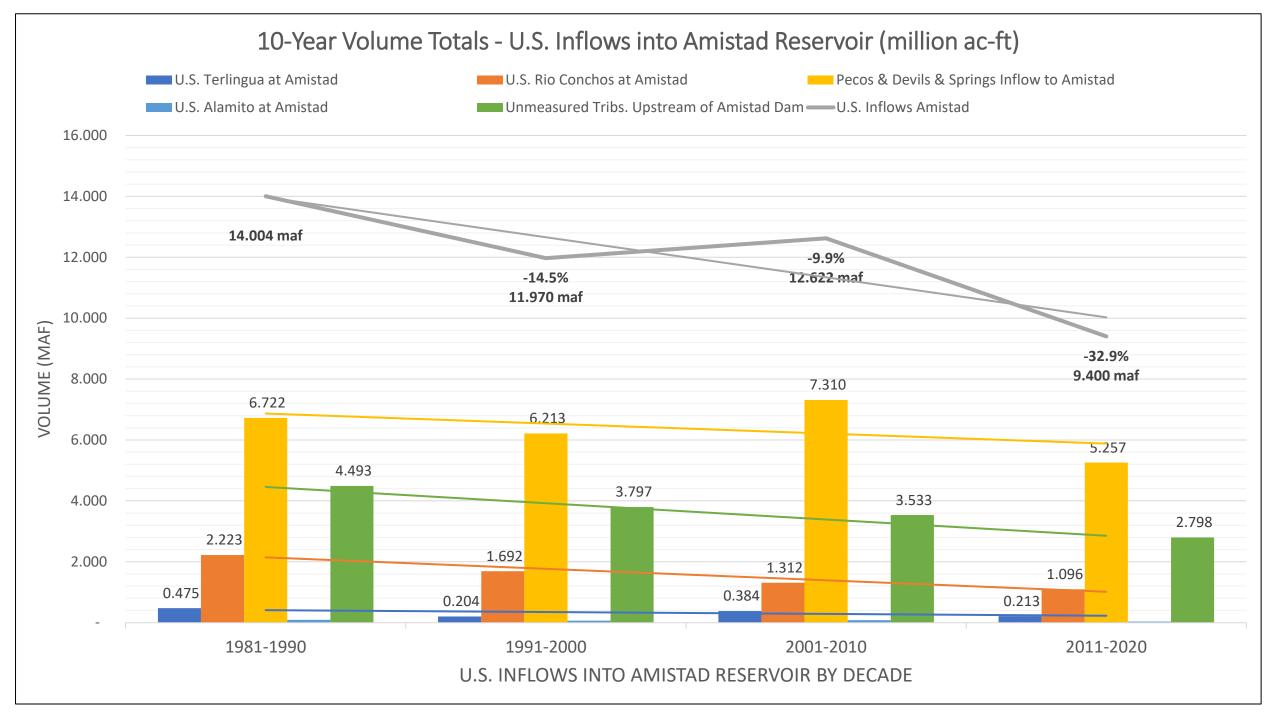
- 3.2 maf less in Total
 U.S. Inflow
- 2.1 maf less from U.S.
 Tribs. flowing into
 Amistad
- 1.1 maf less from the Mainstem U.S. Inflows

Last 10 - Compared to 1980s

- 4.6 maf less in total
 U.S. Inflow
- 1.5 maf less from U.S.
 Tribs. flowing into
 Amistad
- 3.1 maf less from the Mainstem U.S. Inflows

10-Year Volume Totals - U.S. Inflows into Amistad Reservoir (million ac-ft)



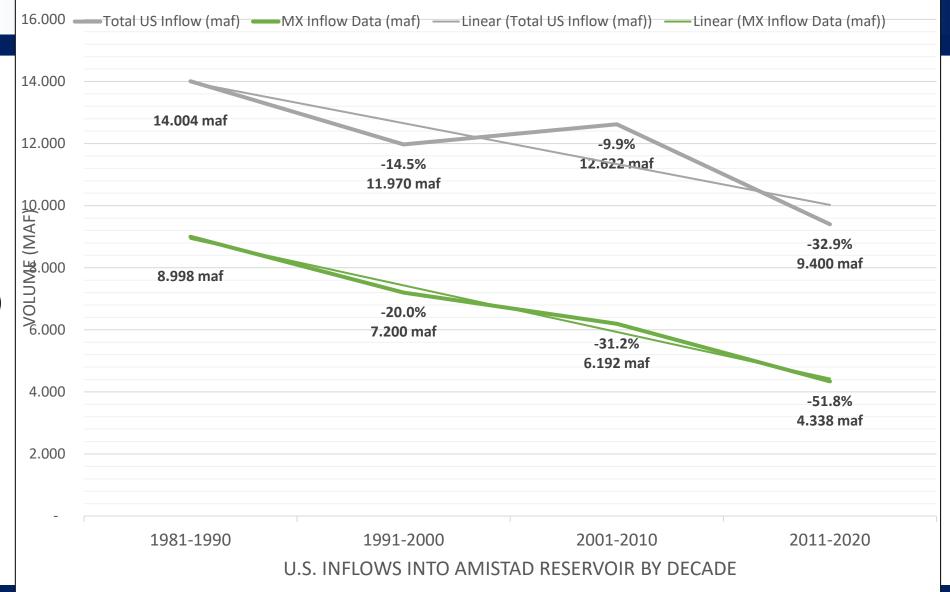




Amistad Dam

- Data Source is Binational Rio Grande Accounting
- Mexico Inflows
 - 52 % Decline since
 1980s
- MX Includes
 - Rio Conchos (allotted)
 - 50% UnmeasuredTribs. & Springs
- U.S. Includes
 - Alamito, Terlingua,
 Devils, Pecos, U.S.
 Springs, Rio Conchos (allotted)
 - 50% UnmeasuredTribs. & Springs

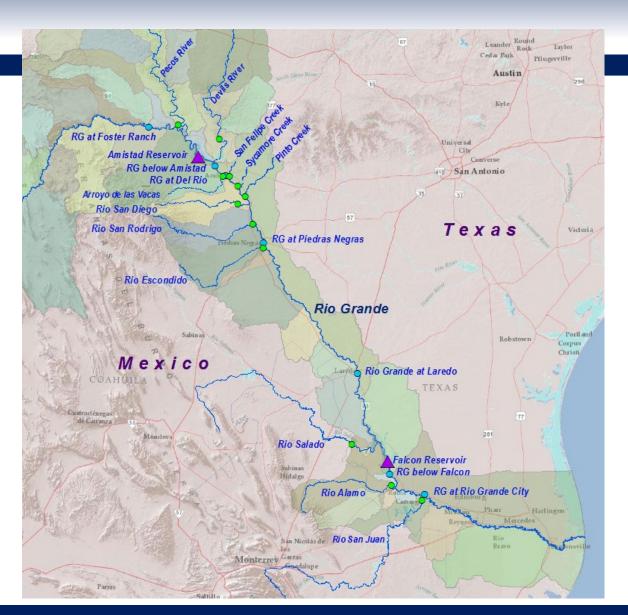
10-Year Volume Totals - U.S. & Mexico Inflows into Amistad Reservoir (million ac-ft)

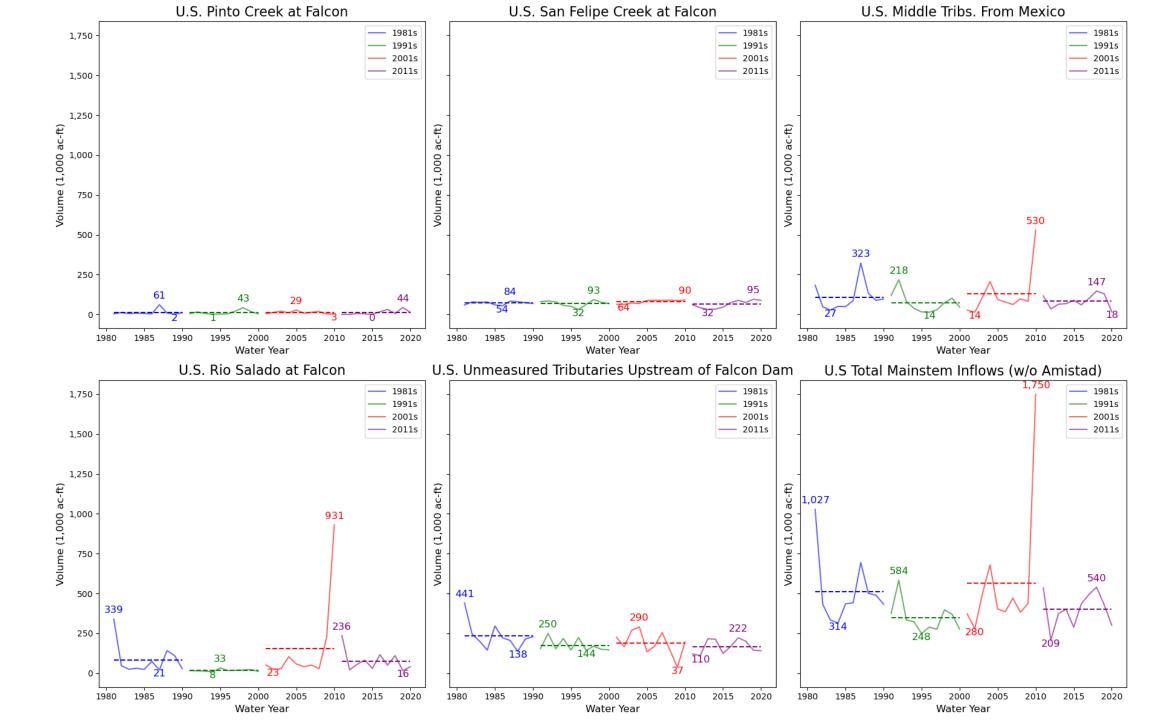




FALCON DAM AND RESERVOIR

- U.S. Inflows into Falcon Reservoir
 - Arroyo de las Vacas
 - Rios San Diego, San Rodrigo, Escondido
 - o Rio Salado
 - Pinto Creek
 - San Felipe Creek
 - 50% of any other flows not otherwise allotted. (Runoff)
- Amistad Release Removed





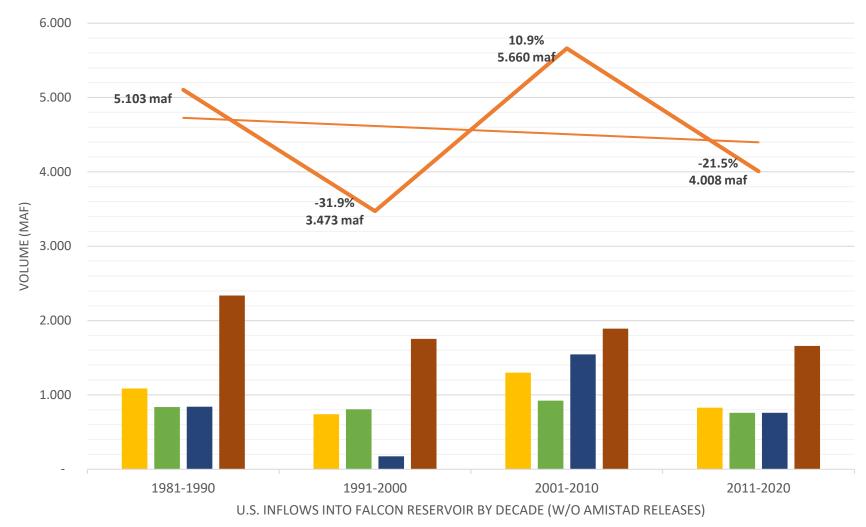


Falcon Dam

- Last 10 Compared to 2000s
 - 1.6 maf less in Total U.S. Inflow
 - 0.16 maf less from U.S.
 Tribs. flowing into Falcon
 - 1.26 maf less from Mx
 Tribs. Flowing into Falcon
 - 0.23 maf less from Unmeasured Tributaries
- Last 10 Compared to 1980s
 - 1.1 maf less in total U.S. Inflow
 - 0.08 maf less from U.S.
 Tribs. flowing into Falcon
 - 0.34 maf less from Mx
 Tribs. Flowing into Falcon
 - 0.68 maf less from Unmeasured Tributaries









INITIAL OBSERVATIONS

- Major Decline in Inflows into Amistad compared to 1980s
 - 33% Decrease or 460,000 acre-feet annually
 - U.S. Tribs. Declined 178,000 ac-ft (-24%)
 - Mx Tribs. Declined 113,000 ac-ft (-51%)
 - Unmeasured Tribs. Declined 170,000 ac-ft (-38%)
- Moderate Decline in Inflows into Falcon compared to 1980s
 - 21.5% or 110,000 acre-feet annually
 - U.S. Tribs. Declined 8,000 ac-ft (-9%)
 - Mx Tribs. Declined 34,000 ac-ft (-18%)
 - Unmeasured Tribs. Declined 68,000 ac-ft (-29%)

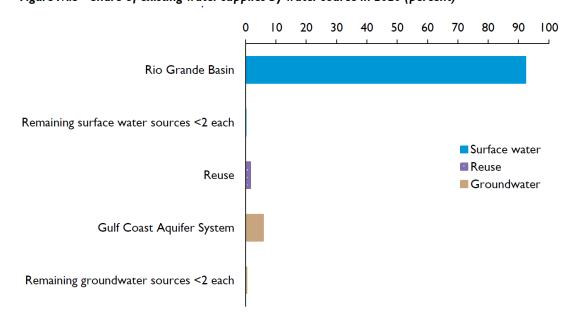


STATEWATER PLAN 2022

Table M.4 - Population, existing supplies, demands, needs, and strategies 2020-2070 (acre-feet per year)

	Decade	2020	2030	2040	2050	2060	2070	Change
	Population	1,961,000	2,379,000	2,795,000	3,212,000	3,626,000	4,029,000	105%
Existing supplies	Surface water	828,000	828,000	826,000	825,000	826,000	826,000	0%
	Groundwater	55,000	55,000	56,000	56,000	56,000	56,000	2%
	Reuse	13,000	14,000	14,000	14,000	14,000	15,000	15%
	Total water supplies	896,000	898,000	895,000	896,000	897,000	897,000	0%
Demands	Municipal	307,000	365,000	423,000	483,000	544,000	605,000	97%
	County-other	9,000	9,000	11,000	12,000	14,000	15,000	67%
	Manufacturing	4,000	5,000	5,000	5,000	5,000	5,000	25%
	Mining	17,000	16,000	15,000	13,000	10,000	10,000	-41%
	Irrigation	1,427,000	1,381,000	1,335,000	1,290,000	1,244,000	1,198,000	-16%
	Steam-electric	15,000	15,000	15,000	15,000	15,000	15,000	0%
	Livestock	5,000	5,000	5,000	5,000	5,000	5,000	0%
	Total water demand	1,784,000	1,797,000	1,809,000	1,822,000	1,837,000	1,853,000	4%
Needs	Municipal	32,000	65,000	111,000	167,000	227,000	287,000	797%
	County-other	4,000	4,000	6,000	7,000	9,000	10,000	150%
	Manufacturing	1,000	1,000	1,000	1,000	1,000	1,000	0%
	Mining	7,000	6,000	5,000	4,000	5,000	5,000	-29%
	Irrigation	889,000	844,000	798,000	753,000	707,000	662,000	-26%
	Steam-electric	5,000	5,000	5,000	5,000	5,000	5,000	0%
	Total water needs	937,000	924,000	926,000	937,000	953,000	970,000	4%
Strategy supplies	Municipal	63,000	123,000	187,000	252,000	308,000	366,000	481%
	County-other	4,000	5,000	7,000	8,000	11,000	12,000	200%
	Manufacturing	<500	1,000	1,000	1,000	1,000	1,000	0%*
	Mining	2,000	2,000	1,000	1,000	1,000	1,000	<i>-</i> 50%
	Irrigation	70,000	81,000	92,000	102,000	111,000	121,000	73%
	Steam-electric	2,000	8,000	8,000	8,000	8,000	8,000	300%
	Total strategy supplies	141,000	219,000	296,000	372,000	440,000	508,000	260%

Figure M.3 - Share of existing water supplies by water source in 2020 (percent)





1944 WATER TREATY – 5YR CYCLE DELIVERIES

5yr Cycle Deliveries (as of July 27, 2024)

o Cycle Year 1 - 61,161 AF (75.4 MCM)

o Cycle Year 2 – 240,266 AF (296.4 MCM)

o Cycle Year 3 – 72,522 AF (89.5 MCM)

o Cycle Year 4 – 24,710 AF (30.5 MCM)

o Cycle to date - 398,658 AF (491.7 MCM)

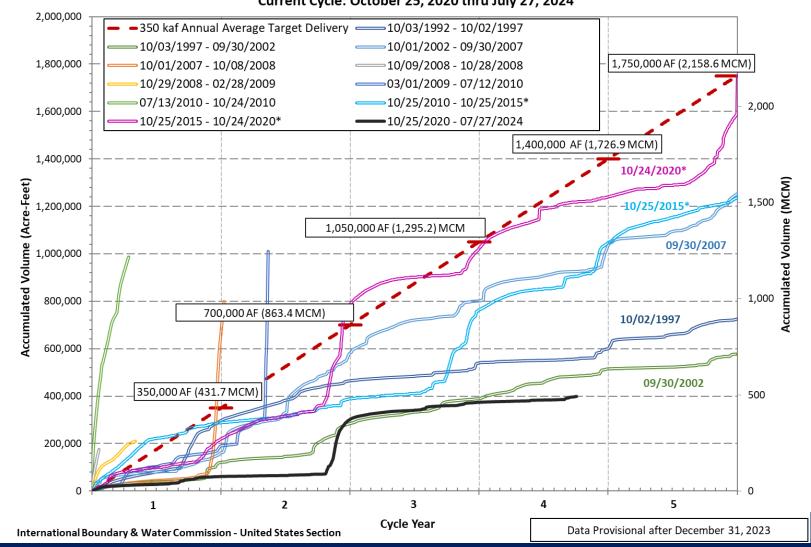
o 839,523 AF (1,036 MCM) below seasonal curve

o 32.2% of expected minimum seasonal deliveries

Rio Grande River Basin

Estimated Volumes Allotted to the United States by Mexico from Six Named Mexican Tributaries and Other Accepted Sources* under the 1944 Water Treaty

Current Cycle: October 25, 2020 thru July 27, 2024





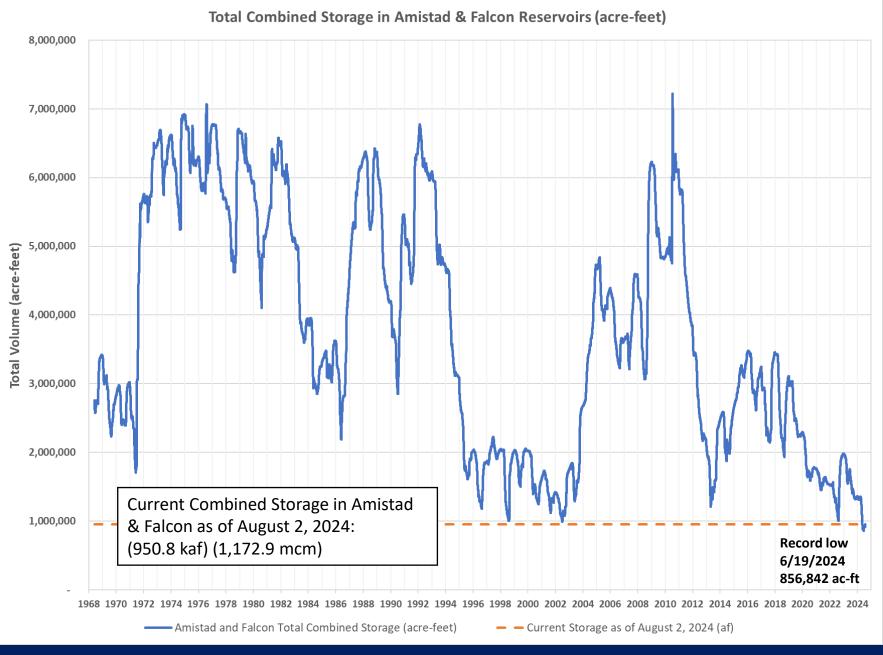
Ownerships as of July 27, 2024

U.S. Storage

_	%cap	TCM	Acre-Ft
Amistad	25.1%	562,000	456,000
Falcon	13.4%	259,000	210,000
Total	19.7%	821,000	666,000

Mx. Storage

		•		
	%cap	TCM	Acre-Ft	
Amistad	12.1%	211,000	171,000	
Falcon	10.1%	138,000	112,000	
Total	11.2%	349,000	283,000	





Rio Conchos

- o 579,000 ac-ft
- o 714.0 mcm
- o 19.2% Full
- Middle Tribs.
 - o 156,000 ac-ft
 - o 192.6 mcm
 - o 27.6% Full

(Based on Useable Storage)

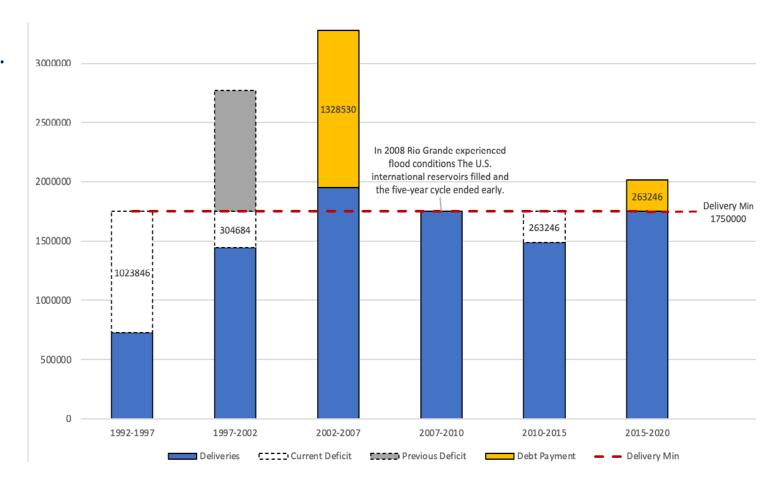




COOPERATION ON THE RIO GRANDE

1969 Minute 234 (1969): Modification to allocation of water deliveries to the U.S.

- Minute 279 (1989) and Minute 297 (1997): Sanitation at Nuevo Laredo
- Minute 282 (1990) and Minute 303 (2000): Salinity issues in Lower Rio Grande
- Other minutes on infrastructure
- Minute 325 (2020): "... to improve the predictability and reliability of Rio Grande water deliveries to users in the United States and Mexico..."
 - New Minute (2024)





ENGAGEMENT WITH MEXICO: STATE DEPARTMENT

- State Department officials met on multiple occasions with stakeholders such as Members
 of Congress and farmers' representatives to learn about the impacts of Mexican water
 delivery shortfalls and seek solutions.
- The **Secretary of State** raised this issue directly with Mexico's Foreign Secretary, asking Mexico to sign the Rio Grande Minute and make immediate water deliveries.
- The State Department has sent **two diplomatic notes** to Mexico's Foreign Ministry calling for the signing of the proposed Rio Grande agreement and immediate water deliveries from Mexico to the United States.
- The U.S. Ambassador to Mexico, Ken Salazar, and other senior U.S. officials continue to urge the Mexican government to take these steps and have participated in several meetins



ENGAGEMENT WITH MEXICO: USIBWC

- Commissioner Giner traveled to Matamoros in May and twice to Mexico City in June to press the state of Tamaulipas and the Mexican federal government to support and sign the Rio Grande minute.
- Commissioner Giner asked Mexico's National Water Commission (CONAGUA) to share its
 plans for making water deliveries to the U.S. under wet or dry scenarios, and CONAGUA
 agreed to do so.
- Dr. Giner reinforced this request formally in letters to the Mexican Section of IBWC.



QUESTIONS AND DISCUSSION

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INTERNATIONAL BOUNDARY AND WATER COMMISSION

UNITED STATES SECTION

Lower Rio Grande Flood Control Project

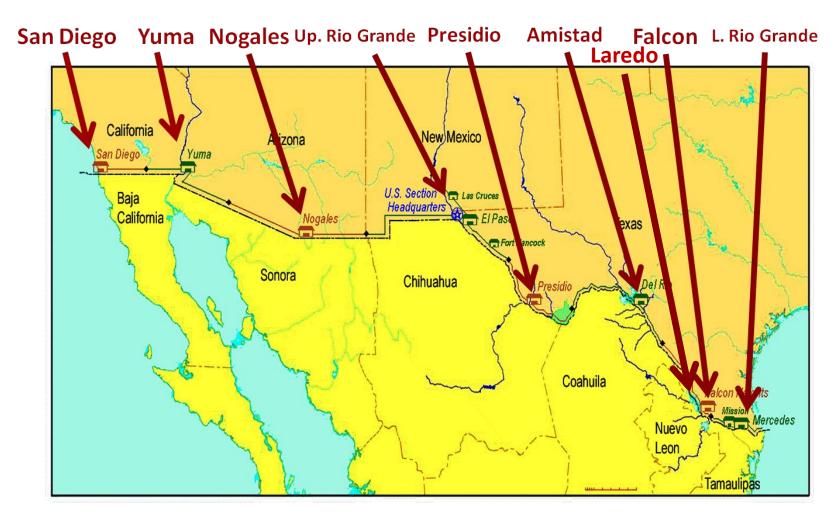
Juan F. Uribe, RM & Francisco Martinez, DRM, Joseph Tritz, M&O Supervisor



Agenda

- Lower Rio Grande Field Office
- Lower Rio Grande Flood Control Project
- Operations and Maintenance Activities





- 258 principal monuments along the land boundary in NM, AZ, and CA
- There are nine (9) IBWC field office across the U.S./Mexico border.
- In Texas, the Rio Grande River forms the international boundary between the U.S. and Mexico.



Lower Rio Grande Field Office Staffing

Mercedes Field Office

27 Employees:

Managers: 2

O&M Supervisors: 1

Maintenance Mechanic Leader: 1

Supply Technicians: 2

Civil Engineer Technician: 1

Engineering Equipment Operator (WG:10): 4

Engineering Equipment Operator (WG:08): 2

Servicer: 1

Tractor Operator: 5

Maintenance Mechanic: 1

Heavy Equipment Mechanic: 2

Welders: 2

Maintenance Workers: 3

Laborer: 2

Support Personnel

7 Employees:

Regional Security Officer: 1

Construction Engineer: 1

Realty Chief: 1

Realty Specialist: 1

WAPA Engineer: 1

Civil Engineer: 1

Surveyor: 1

Hydro Tech: 2

Anzalduas / Retamal Dams

9 Employees:

Dam Operations

Supervisor: 1

Lock & Dam Mechanic: 2

Tractor Operator: 1

Dam Operators: 5

2024 Manpower Study

- Recommends 60 additional agency positions
- 6 additional O&M positions for LRGFO to complete the mission



Lower Rio Grande Flood Control Project Features

- 2 International Dams Anzalduas & Retamal Dams
- 270 miles of U.S. levees along the river and floodways
- U.S. floodway system includes Banker Floodway, Main Floodway, North Floodway, and Arroyo Colorado
- 30,000 acres of interior floodway
- 64 miles of pilot channel



Retamal Dam



DESIGN FLOOD

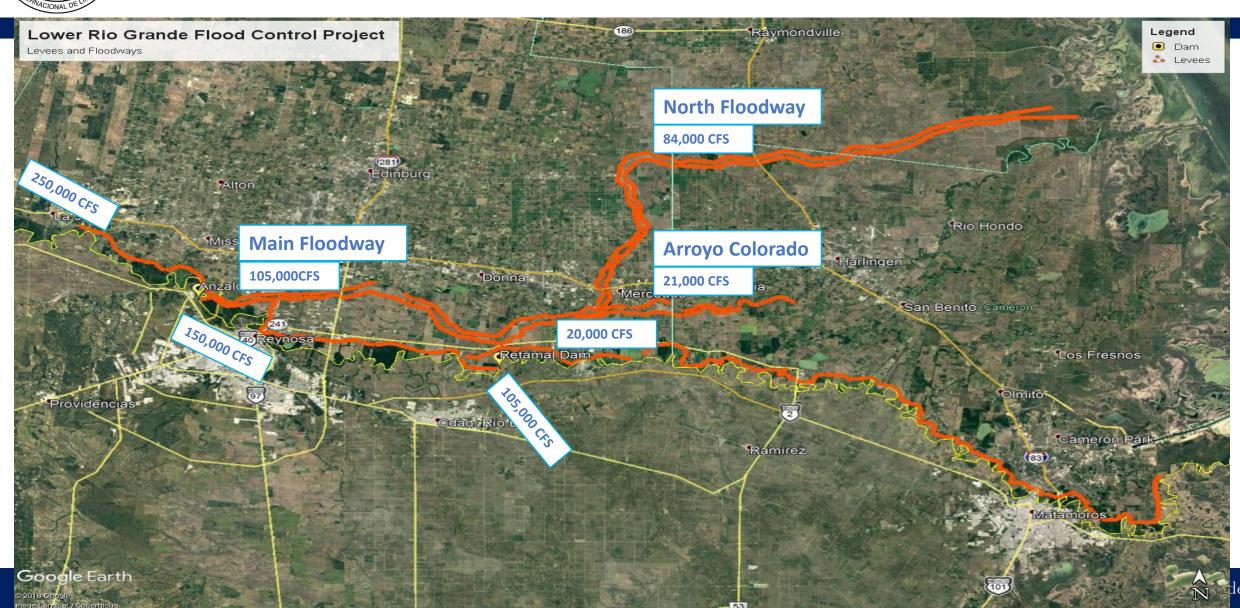
- Lower Rio Grande Flood Design Criteria
 - 250,000 cfs at Rio Grande City
 - 105,000 cfs into the U.S. floodway at Anzalduas Dam
 - 21,000 cfs in the Arroyo Colorado
 - 84,000 cfs in the North Floodway
 - 105,000 cfs in the Mexican floodway at Retamal Dam
 - Limit flows to 20,000 cfs at Brownsville-Matamoros



Arroyo Colorado, Harlingen, TX 8/18/10



LRG FLOOD CONTROL PROJECT – DESIGN FLOOD CAPACITY





CURRENT OPERATIONS OF THE THE LOWER RIO GRANDE FIELD OFFICE

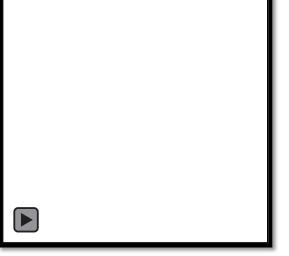


Lower Rio Grande Flood Control O&M

- 1. Levee roadway repair and resurfacing, and slope repair. (20 miles yearly)
- 2. Levee and floodway mowing. (8,500 acres yearly)
- 3. Pilot channel and lateral drain desilting. (15,000 yd³ yearly)
- 4. Inspection and maintenance of irrigation and drainage structures (600 structures.)
- 5. Maintenance of ten (10) floodgates.
- 6. Flood Workshops and Exercises.













Lower Rio Grande Flood Control O&M

LEVEE RESURFACING & REPAIR

- 1. MAINTENANCE OF 270 MILES OF LEVEE ROAD.
 - a. RESURFACING OF LEVEE ROAD
 - b. LAYING AND PROCESSING NEW CALICHE
 - c. FILLING AND REPAIRING POTHOLES
 - d. REPAIR LEVEE SLOPES DUE TO EROSION
 - e. REPAIR OF RAMPS
- 2. FY24 ADDITION OF EQUIPMENT





LEVEE RESURFACING & REPAIR











LEVEE AND FLOODWAY MOWING

- 1. MOW AND CLEAR APPROXIMATELY 12,000 ACRES OF LEVEE SLOPE AND FLOODWAY.
- 2. FY24 REPLACEMENT OF FLEET



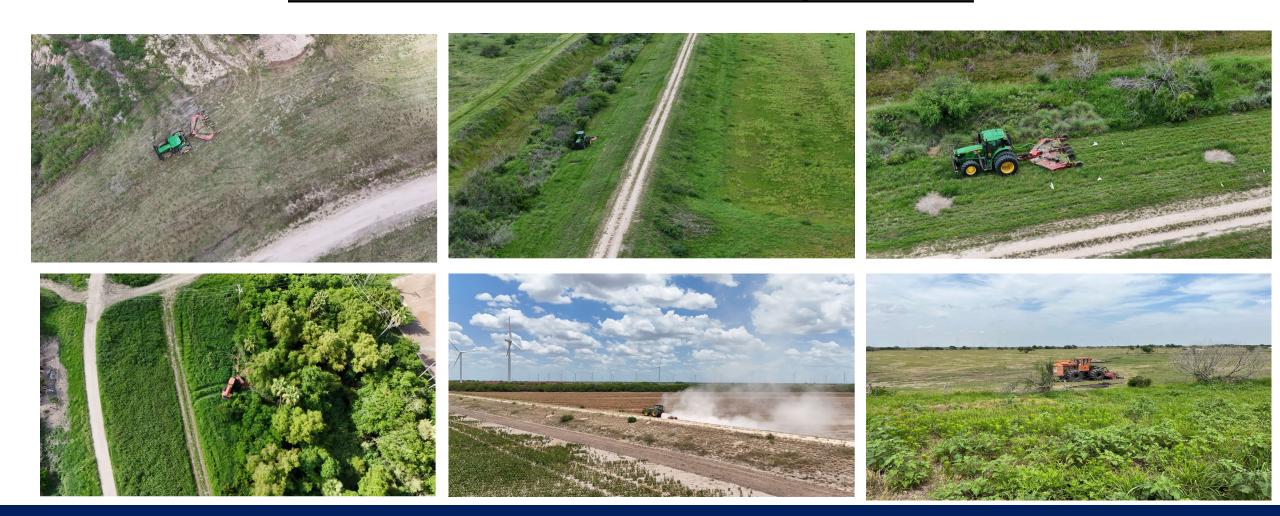
REPLACEMENT OF 7 JOHN DEERE TRACTORS







LEVEE AND FLOODWAY MOWING/CLEARING





CHANNEL AND DRAIN DESILTING

- 1. REMOVAL OF TREES AND DEBRIS
- 2. REPAIR BANK EROSION
- 3. FY24 ADDITION OF EQUIPMENT



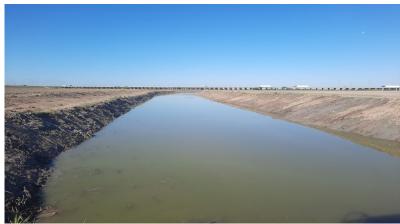


CHANNEL AND DRAIN DESILTING













INSPECTION AND REHABILITATION OF STRUCTURES

- 523 STRUCTURES WITHIN IBWC FLOODWAYS AND LEVEES ARE INSPECTED ON A YEARLY BASIS. THESE STRUCTURES AREA MAINTAINED AND REPAIRED AS NEEDED
 - a. REPLACE SLUICE GATE IF NEEDED
 - b. WEED EATING AROUND STRUCTURES
 - c. PAINT AND STENCIL STRUCTURES
 - d. INSTALL IDENTIFICATION POLES















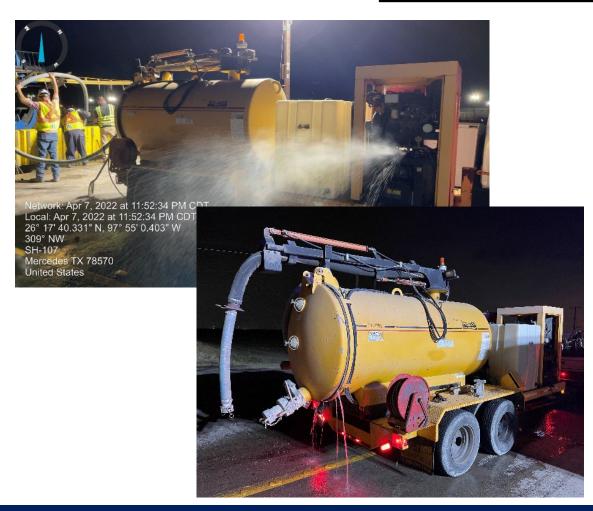


MAINTENANCE OF TEN (10) FLOODGATES

- 1. FLOOD GATE LOCATIONS;
- FM 107 (1-FLOODGATE)
- FM 491 (2-FLOODGATE)
- BUSINESS 83 (2-FLOODGATES)
- JACKSON ROAD (2-FLOODGATES)
- BENTSEN PALM ROAD (1-FLOODGATE)
- HIDALGO POE (1-FLOODGATE)
- ALAMO ROAD (1-FLOODGATE)
- 2. FY24 REPLACEMENT OF EQUIPMENT



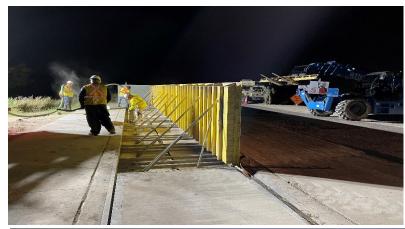
REPLACEMENT OF EQUIPMENT

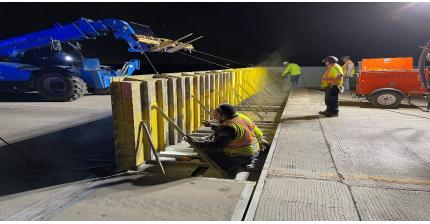






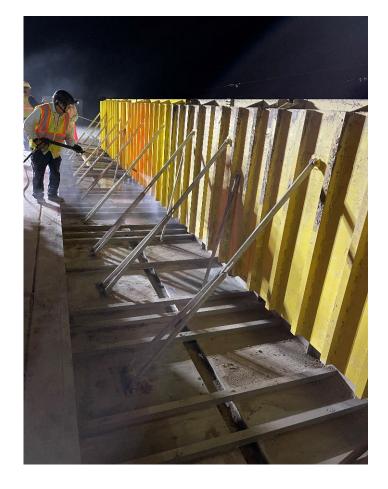
MAINTENANCE OF TEN (10) FLOODGATES













FLOOD WORKSHOPS AND EXERCISES

1. FLOOD EXERCISES SCHEDULED ON JUNE 25 TO JUNE 27, 2024.

2. STAFF TRAINING ON THE FOLLOWING:

- SANDBAGGING
- LEVEE LINER
- BOIL CONTROL
- GATOR PUMPS
- STOP LOG INSERTION & REMOVAL

Play 1 Tuesday, June 25

O7:00 Morning Muster
Introduction at Personnel Building Conference room

O8:00 Sandbagging at Parking Shed. (Santos)
Proper stacking, handling, and transport of sandbags

O8:45 Levee Liner - (Wave Control). Behind Llano Grande (Justo)

O9:30 Structure 163L operation. (David Duque)

10:00 Boil Control at rock pile. (Robert S. and Juan)

10:30 Gator Pump, 2" and 4" pump with Liner El Fueste (Raul, Robert L., and Jim)

LUNCH

13:00 Anzalduas Dam site visit and flood operations briefing (Anz. Staff)

14:45 Gage Board Reading Exercises. (Hydro)

15:15 Confined Space and Atmospheric Test training conference room (Danny)

15:15 Return Items used during days activities and prep for Penitas stop logs.

Flood Exercise Schedule IBWC-LRGFO Mercedes TX Day 2 Wednesday, June 26 07:00 Morning Muster Get water, PPE, and vehicles ready Depart LRGFO for Penitas 08:30 Flood Breaks Flood Gate - explanation of operation, Bentsen State Park (Sal Martinez) 10:00 Stop log insertion and removal - Penitas **Team Assignments** Forklift Operator: Javier Lowboy: Jose Ground guide (signalman): Sal Spotter: Taglines: Danny & Luis Safety Cone placement: David and Marco L. Tag Lines, Ladders & Shop Vac No Crew will leave the Penitas location until the stop-logs are loaded, and the task is complete unless other orders are given

- 13:30 Safety and Security during Flood Ops (Officer Martinez)
- 14:00 Flood Control Operations (Frank Martinez)
- 15:00 Prep for Mercedes Stop logs.



FLOOD WORKSHOPS AND EXERCISES















EQUIPMENT REPLACEMENT PROGRAM

AGENCY \$60M OVER 6-YEARS EQUIPMENT REPLACEMENT PLAN

FISCAL YEAR	LRGFO	AGENCY TOTAL	% OF TOTAL
FY22	\$1,062,000	\$10,000,000	11%
FY23	\$500,000	\$3,500,000	14%
FY24	\$960,000	\$6,000,000	16%
TOTAL	\$2,522,000	\$19,500,000	13%



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Questions?

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