

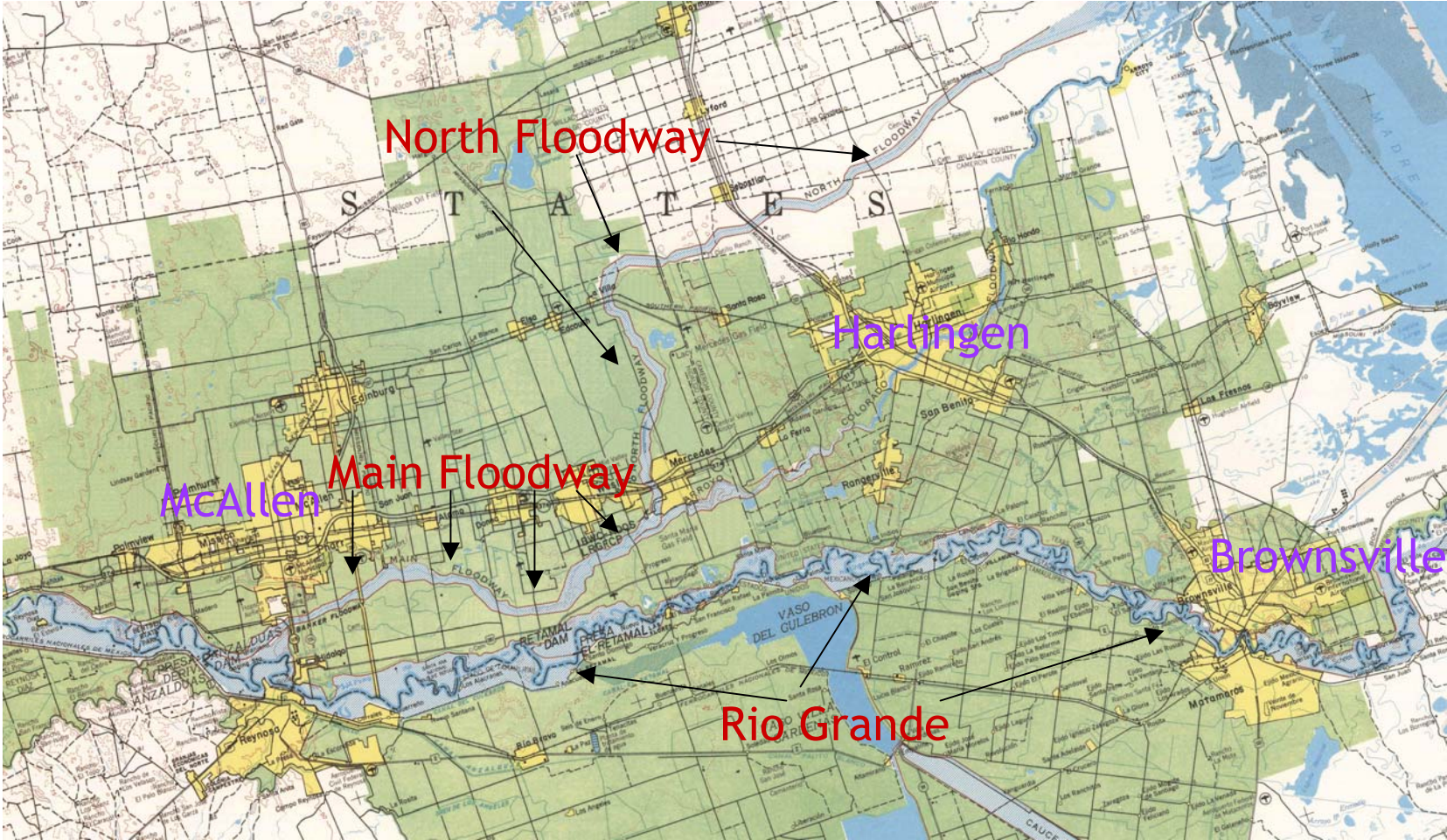
LOWER RIO GRANDE FLOOD CONTROL PROJECT (LRGFCP) REHABILITATION

Rick Reyes, Lower Rio Grande Project Manager
U.S. Section, International Boundary and Water
Commission

October 16, 2006



LRGFCP Levee Rehabilitation



LRGFCP Levee Rehabilitation Updates

- Members of the Survey and Investigations Staff of the House Committee on Appropriations met with USIBWC in July 2006.
 - Toured the project in early August 2006.
 - Met with legislators and local officials in Mission.
 - Informed of the seriousness of potential economic, health, and safety impacts
- Final report on the investigation submitted to the House Committee in Sept. 2006

LRGFCP Levee Rehabilitation Updates

- Based on discussions with the Committee, levee reaches re-defined and cost estimates updated in August 2006.
- Updated USIBWC work plan available at:
www.ibwc.state.gov/FinalWP111504.pdf
- Last major upgrade in 1970s following Hurricane Beulah (1967)

LRGFCP Rehabilitation Estimate

- Planning (All Reaches) \$ 0.7 M
- Environmental Studies (All Reaches) \$ 1.4 M
- Engineering & Design (All Reaches) \$10.4 M



Raymondville, 1967
aftermath of
Hurricane Beulah

LRGFCP Rehabilitation Estimate

Construction of Levee Improvements

▪ Levee Road Resurfacing (FY01-FY05)	\$ 0.1 M
▪ Hidalgo Loop & Hike/Bike Trail (4.5 miles)	\$ 11.7 M
▪ Mission: Peñitas to Main Floodway (12 miles)	\$ 23.0 M
▪ Anzalduas Dam (incl. Dike) to Hidalgo Loop (6 mi.)	\$ 14.0 M
▪ Lateral A to Donna Pump (11 miles)	\$ 18.3 M
▪ Retamal Dike (3 miles)	\$ 5.4 M
▪ Donna Pump to Brownsville (18 miles)	\$ 19.0 M
▪ <u>Interior Floodways (58 miles)</u>	<u>\$ 21.5 M</u>

Total (Planning, Env., Eng./Design, Construction) \$125.5M

Hidalgo Loop Levee to Lateral A



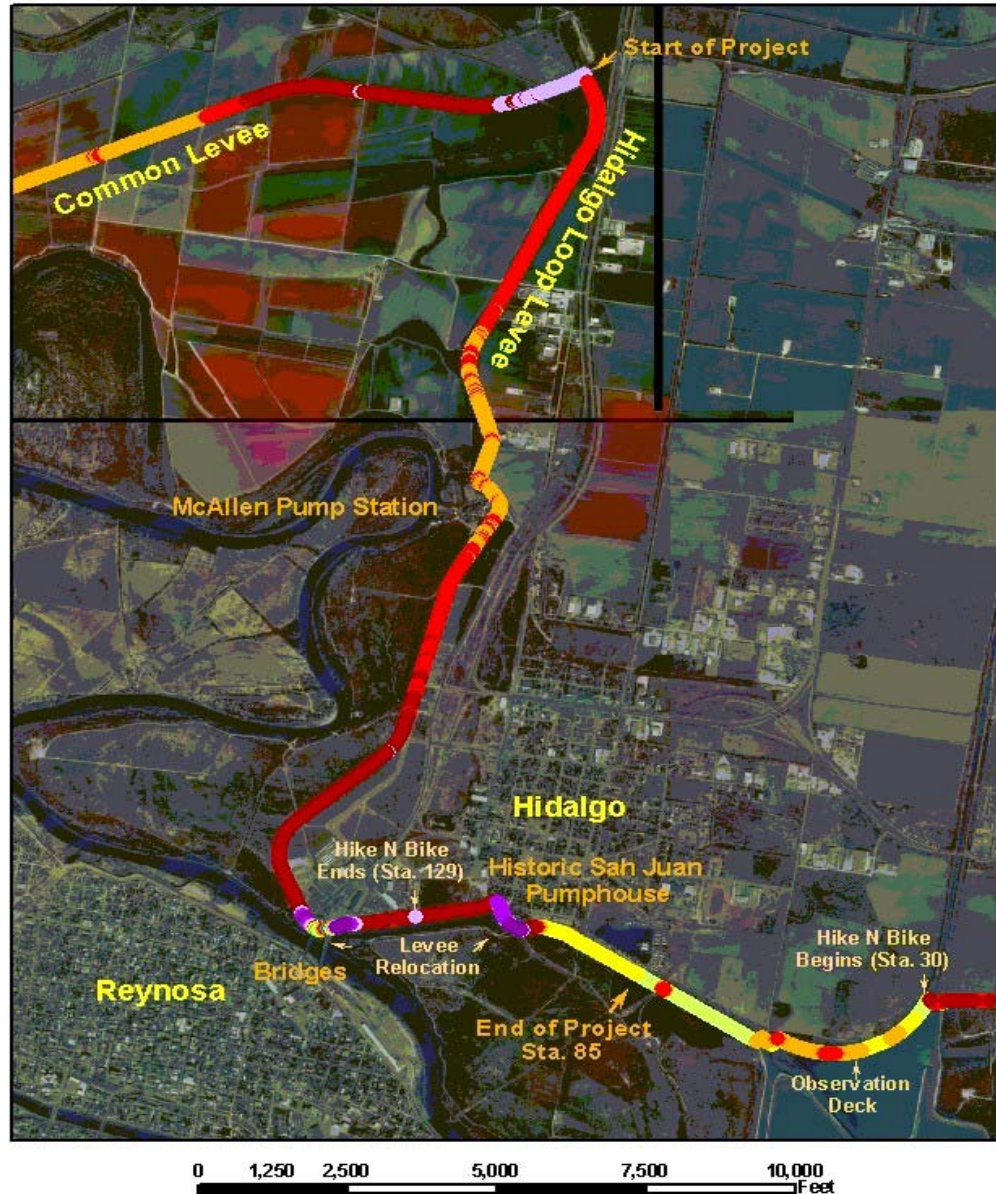
6+ feet overtop

- + 6ft overtop
- 5 to 6 ft overtop
- 4 to 5 ft overtop
- 3 to 4 ft overtop
- 2 to 3 ft overtop
- 1 to 2 ft overtop
- 0 to 1 ft overtop
- 0 to 1 ft freeboard
- 1 to 2 ft freeboard
- 2 to 3 ft freeboard
- 3 to 4 ft freeboard
- 4 to 5 ft freeboard

2-4 ft.
overtop

0-2 ft.
freeboard

4-5 ft. freeboard

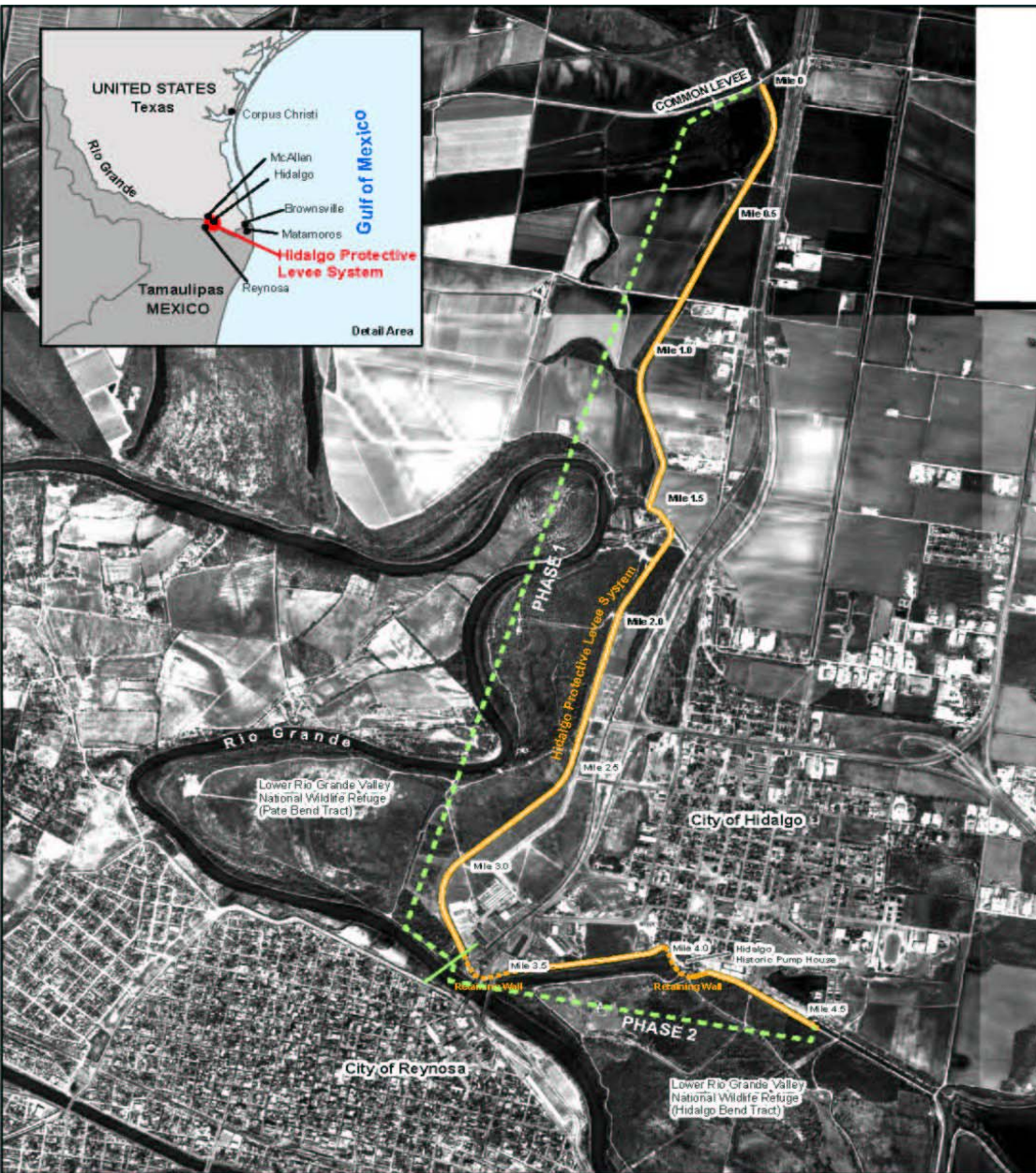


Hidalgo Hike and Bike Trail Levee

- Carlson Settling Basin Levee Segment (completed April 2006)
- USIBWC is working with the City of Hidalgo on assessing recent damages due to heavy rains



Hidalgo Levee Rehabilitation



Environ. Assessment:
Mile 0.0 – 4.5
Jan. 05 – Sept. 05

Design (Phase I-II)
Sept. 05 – Aug. 07

Construction (Phase 1):
Mile 0.0 – 3.3
Jun. 2008 – Jun. 2009

Construction (Phase 2):
Mile 3.3-4.5
Nov. 2008 – Dec. 2009

Mission: Peñitas to Anzalduas Dam

6+ feet overtop

2-4 ft.
overtop

0-2 ft.
freeboard

4-5 ft. freeboard

Freeboard/Overtop

- +6ft overtop
- 5 to 6 ft overtop
- 4 to 5 ft overtop
- 3 to 4 ft overtop
- 2 to 3 ft overtop
- 1 to 2 ft overtop
- 0 to 1 ft overtop
- 0 to 1 ft freeboard
- 1 to 2 ft freeboard
- 2 to 3 ft freeboard
- 3 to 4 ft freeboard
- 4 to 5 ft freeboard



0 2,500 5,000 10,000 15,000 20,000 Feet

Mission: Penitas to Anzalduas Rehabilitation



Env. Assessment:

Mile 0.0 – 12.0

Aug. 2005 – Sep.
2006

Design:

Mile 0.0 – 12.0

Aug. 2007 – Jul.
2008

Construction:

Mile 0.0 – 12.0

Jun. 2009 –
Sept. 2011

Anzalduas Dam to Hidalgo Loop Levee

6+ feet overtop

2-4 ft.
overtop

0-2 ft.
freeboard

4-5 ft. freeboard

Freeboard/Overtop

- +6ft overtop
- 5 to 6 ft overtop
- 4 to 5 ft overtop
- 3 to 4 ft overtop
- 2 to 3 ft overtop
- 1 to 2 ft overtop
- 0 to 1 ft overtop
- 0 to 1 ft freeboard
- 1 to 2 ft freeboard
- 2 to 3 ft freeboard
- 3 to 4 ft freeboard
- 4 to 5 ft freeboard



Lateral A to Retamal Dike

6+ feet overtop

2-4 ft overtop

0-2 ft.
freeboard

4-5 ft. freeboard

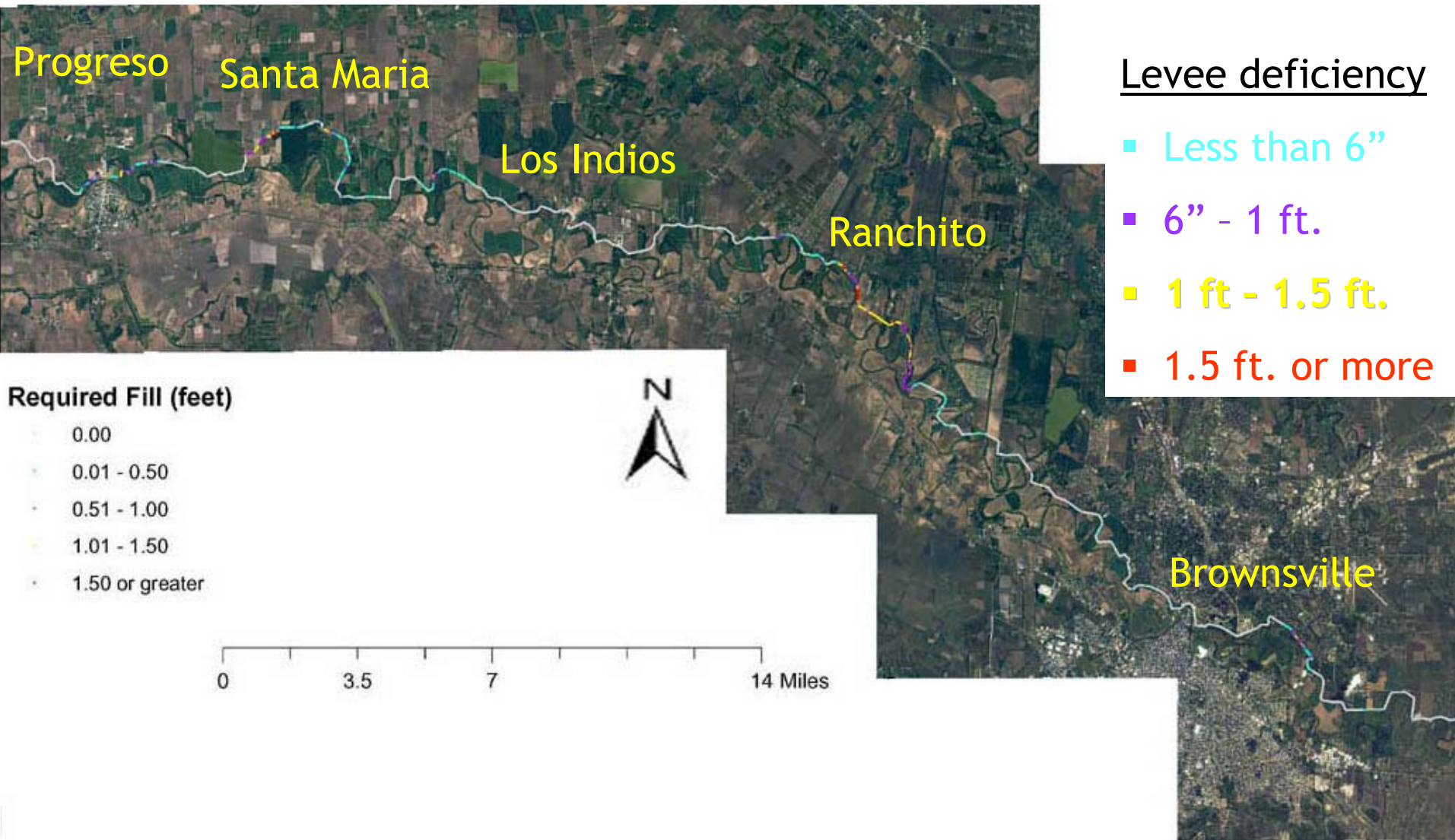
Freeboard/Overtop

- +6ft overtop
- 5 to 6 ft overtop
- 4 to 5 ft overtop
- 3 to 4 ft overtop
- 2 to 3 ft overtop
- 1 to 2 ft overtop
- 0 to 1 ft overtop
- 0 to 1 ft freeboard
- 1 to 2 ft freeboard
- 2 to 3 ft freeboard
- 3 to 4 ft freeboard
- 4 to 5 ft freeboard

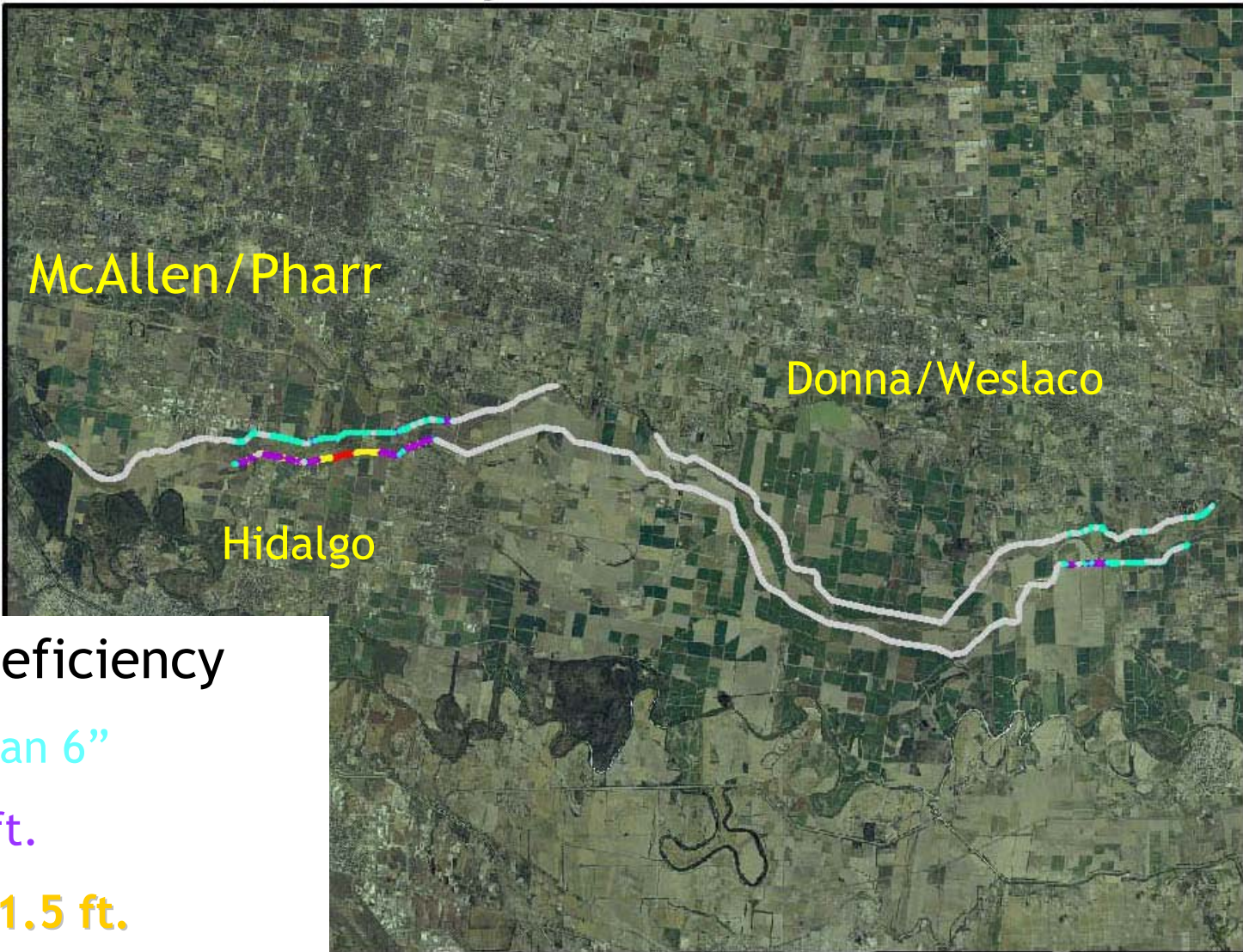


0 5,000 10,000 20,000 30,000 40,000 Feet

Donna Pump to Brownsville



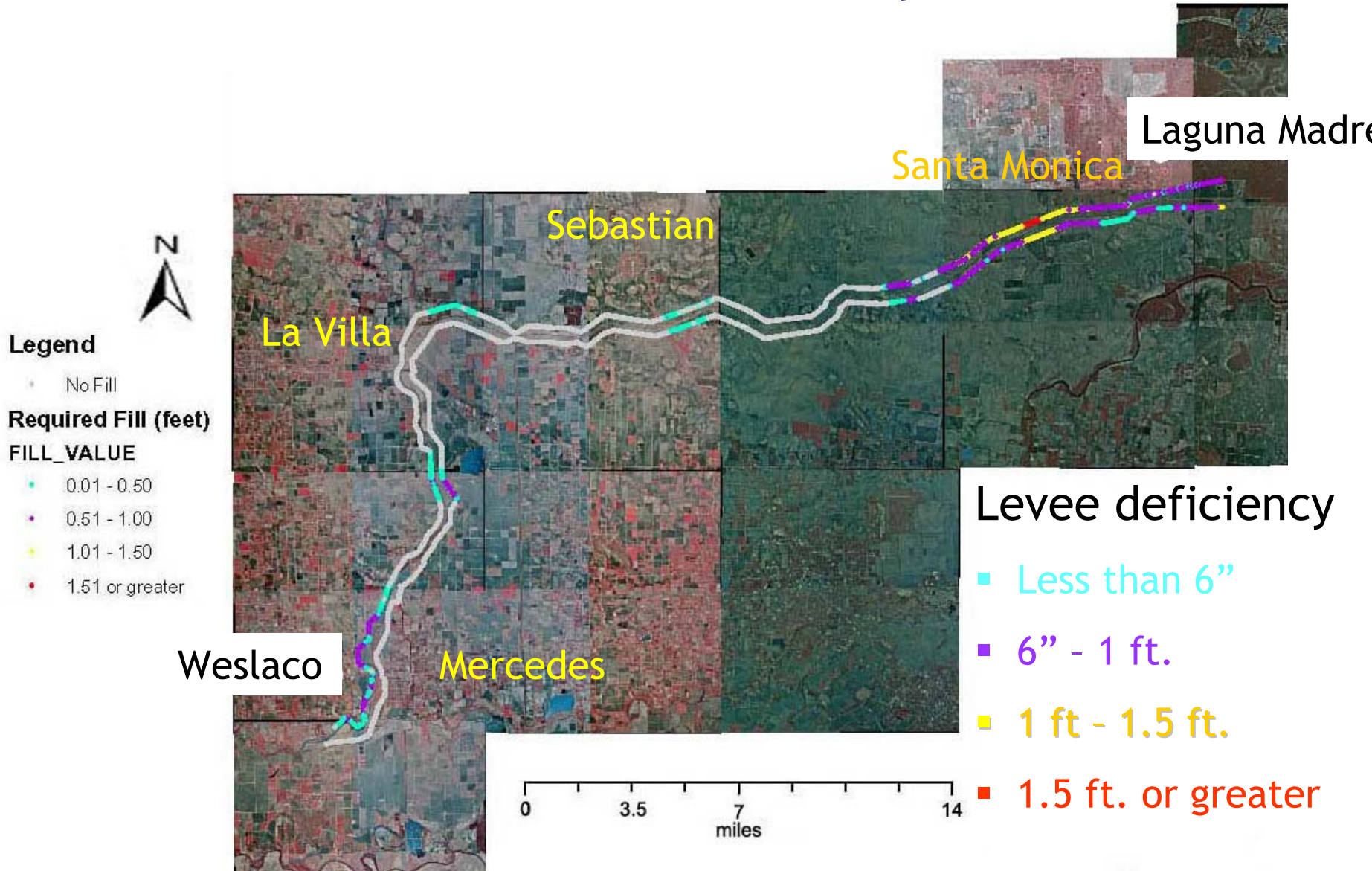
Main Floodway



Levee deficiency

- Less than 6"
- 6" - 1 ft.
- 1 ft. - 1.5 ft.
- 1.5 ft. or greater

North Floodway



FEMA Certification

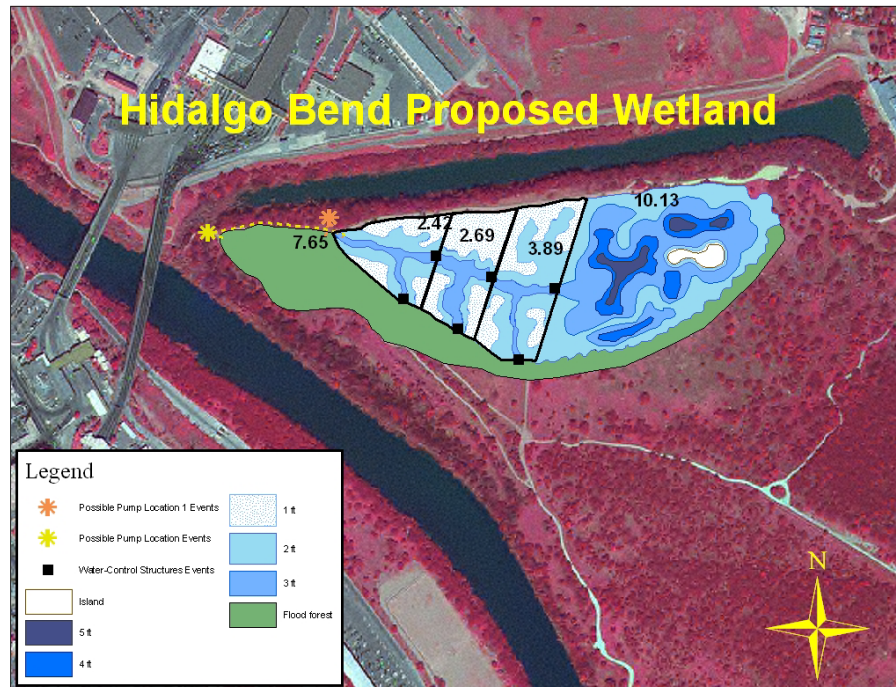
- FEMA has requested USIBWC to certify federal levees in Hidalgo and Cameron Counties.
- Information will be provided to FEMA by Nov. 1, 2006.
- USIBWC will inform FEMA that levee reaches are not certifiable.
- FEMA re-mapping of floodplains in Hidalgo and Cameron Counties expected to be completed by end of FY 07.

Model Validation and FLO2D Modeling

- USIBWC HEC-RAS hydraulic model will be validated by USIBWC consultant, S&B Infrastructure.
- Additional data will be incorporated into the model.
- 2-dimensional modeling (FLO2D) underway using topographic LiDAR data from Willacy, Cameron, and Hidalgo counties and Mexico
- FLO2D model will indicate potential areas of inundation.
- Work to be completed by August 2007.

Mitigation

- USIBWC and USFWS are cooperating to develop wildlife habitat in two areas within the floodplain
 - Hidalgo Bend (Hidalgo World Birding Center)
 - Milagro site - approximately 6 miles downstream of Hidalgo



Contact Information

United States Section
International Boundary and Water Commission

4171 N. Mesa, C-100

El Paso, TX 79902

915-832-4100

www.ibwc.state.gov



Levee Workplan:

www.ibwc.state.gov/FinalWP111504.pdf