Upper Rio Grande Flood Control Projects

International Boundary and Water Commission
United States Section
Engineering Services Division

October 6, 2011
WHY PERFORM LEVEE IMPROVEMENTS

- FEMA is updating flood insurance maps.
- In September 2005, FEMA sent notice to USIBWC requiring USIBWC to certify all levees in El Paso, Hudspeth, and Dona Ana Counties.
- Given the certification requirements, USIBWC was not able to certify the levees at that time.
- Levees required to be certified and accredited to be shown as providing flood protection from the 1% chance storm (100-year flood).
- Flood protection must include minimum 3 feet of freeboard
- Flood protection must ensure structural integrity of levee
## AMERICAN RECOVERY & REINVESTMENT ACT

Upper Rio Grande Flood Control Project – $115.4 million

ARRA funds

- $75.3 Million, New Mexico, Congressional District 2
- $27.2 million, El Paso County, Congressional District 16
- $6.1 million, Hudspeth County, Congressional District 23
- $6.8 million, Presidio County, Congressional District 23

$220 million of ARRA fund were appropriated to USIBIW on February 17, 2009.
TYPICAL NEW LEVEE
TYPES OF LEVEE FAILURES

Riverside

Landside

Overtopping

Through seepage

Underseepage (sand boils)

Base Flood Elevation

(1% annual chance of occurrence) = 100 year event

Structural Integrity

Slope failure
CURRENT AREA LEVEE PROJECTS

- Hatch Levee Improvements
- Mesilla Levee Improvements, Phase 1
- Mesilla Levee Improvements, Phase 2
- Canutillo Levee Improvements
- Sunland Park Levee Improvements
- Canutillo Levee Design, Phase 2
- Vado Levee Design
- Courchesne & NEMEXAS Levee Design
- Riverside to Fabens Levee Design
HATCH LEVEE IMPROVEMENTS

- 13.7 miles of levee
- $7.9 Million contract to Milestone Excavation, Inc.
- Notice to Proceed issued February 3, 2010
- Anticipated completion November 2011
- All complete except for 3 sluice gates (99)%

Hatch Siphon to Bignell Arroyo (west levee)
CANALIZATION PROJECTS
MESILLA PHASE 1

- 33.4 miles of levee
- $31.1 million contract to Lakeshore Engineering Services, Inc.
- Notice to Proceed issued January 25, 2010
- Anticipated completion September 2011
- 29 miles of embankment complete – 87%
Mesilla Phase 2 – Brown Line
Leasburg to Mesilla Dam
(east levee)

- 19.6 miles of levee
- $14.8 million contract to Briston Construction LLC
- Notice to Proceed issued September 25, 2010
- Anticipated completion February 2012
- 14.2 miles of embankment complete – 72%
CANUTILLO PHASE 1

- 28.6 levee miles
- $19.3 million contract to Milestone Excavation, Inc.
- Notice to Proceed issued February 3, 2010
- Anticipated completion February 2012
- 28.6 miles of embankment complete – 100%
- Floodgates remaining

Canutillo 1 – Black Line
Vado Bridge To Vinton Bridge (east and west levees)
Vinton Bridge to Borderland Bridge (west levee)
SUNLAND PARK

- 12.8 miles of levee
- $9.2 million awarded to Ultimate Concrete LLC
- Notice to Proceed issued September 28, 2010
- Anticipated completion February 2012
- 1.6 miles of embankment complete – 35%

Sunland Park – Green Line Borderland Bridge To Power Plant (east and west levees)
VADO LEVEE DESIGN

- Design - 1.1 miles of levee
- $0.61 million awarded to Tetra Tech, Inc.
- Design complete
- Construction estimated in 2013

Vado – Orange Line (east levee)
International Boundary and Water Commission
United States Section

CANUTILLO PHASE 2 DESIGN

- Design - 5.7 miles of levee
- $1.8 million design contract awarded to URS Group, Inc.
- Notice to Proceed issued on June 17, 2010
- Anticipated completion December 2011
- 90% design complete
- Construction estimated in 2014 through 2016

Canutillo Phase 2 – Red Line
Vinton Bridge to Borderland Bridge
(east levee)
COURCHESNE & NEMEXAS REACH DESIGNS

- Design - 3.8 miles of levee
- $1.2 million design contract awarded to URS Group, Inc.
- Notice to Proceed issued September 17, 2010
- Anticipated completion October 2011
- 90% design complete
- Construction estimated in 2017
SOCORRO TO FABENS

- Design - 15.7 miles of levee
- $1.8 million design contract awarded to URS Group, Inc.
- Notice to Proceed issued September 24, 2010
- Anticipated completion October 2011
- 90% design complete
- Construction estimated in 2014 or later