

The International Boundary Commission (IBC) and Projects along the U.S. – Mexico Border (1848 – 1941)

USIBWC Citizens Forum

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International Boundary & Water Commission
United States and Mexico

United States Section

Est. 1889





The International Boundary Commission (IBC)

- * The Beginning of the Commission after the Mexican – American War of 1846 – 1848
- * Marking Permanent Border - Monuments
- * Treaties and Minutes
- * Barlow-Blanco Treaty of 1889
- * The Banco Treaty of 1905



MONUMENT No. 202 (IRON), VIEW TO THE W.
On Yuma Desert.

MONUMENTO No. 202 (FIERRO), VISTA AL O.
En el Desierto de Yuma.

IBC New Deal Projects (1933 – 1942)

- * The New Deal Projects
- * National Industrial Recovery Act (NIRA) of 1933 IBC Multi-State Federal Projects
- * Minute 129 – Rectification of the Rio Grande River
- * Public Works Administration (PWA) Projects in the Border States
- * California IBC New Deal Projects
- * Arizona IBC New Deal Projects
- * New Mexico IBC New Deal Projects
- * Texas IBC New Deal Projects
- * Conceptualization of the IBC New Deal Projects



Signing of 1944 Treaty

Why the Projects?

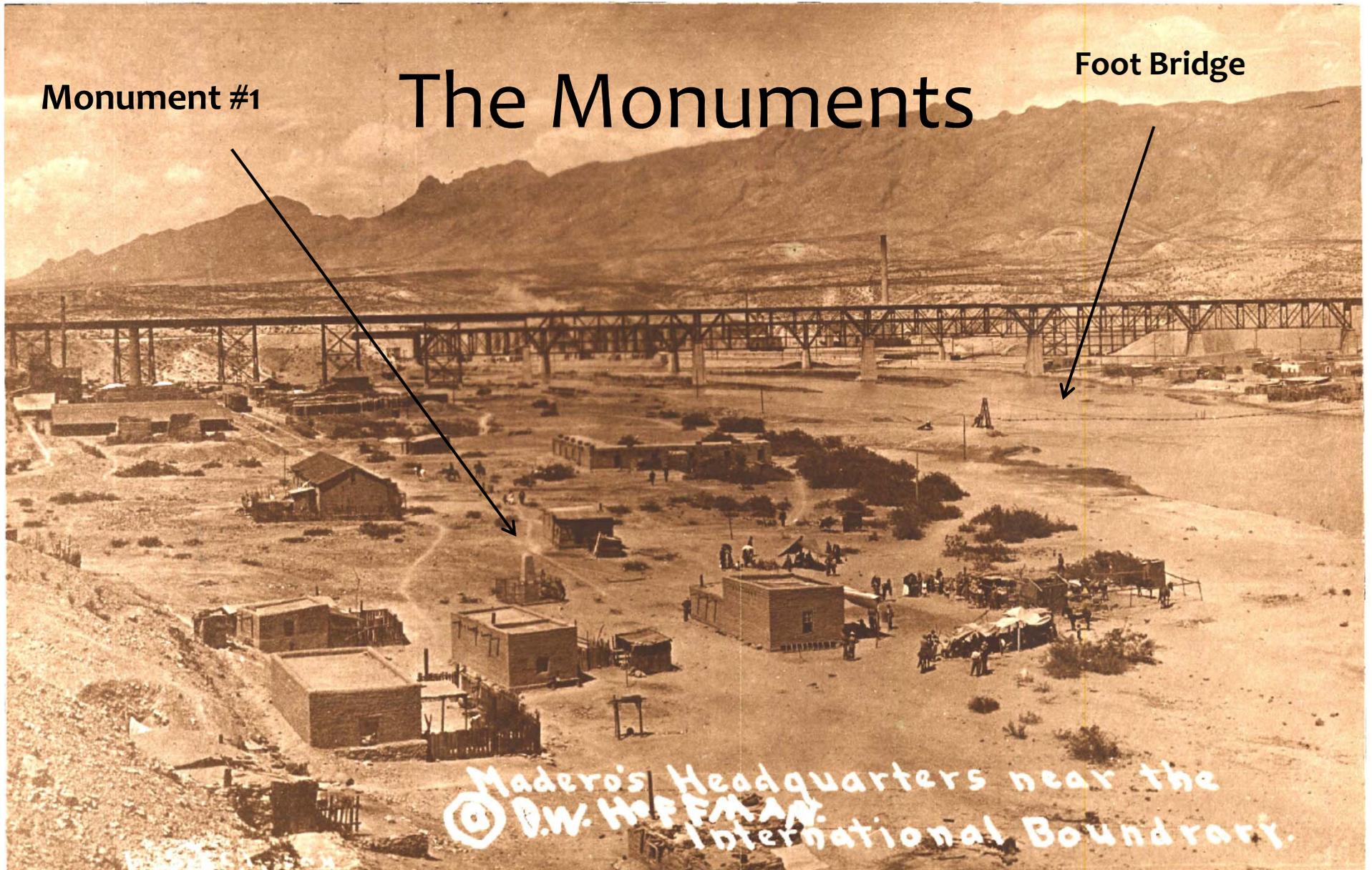
- * Great Depression – 1929 to 1939 or the beginning of WWII when the economy turned to wartime production.
- * Treaties, Conventions and Minutes dictate what is to be completed.
- * National Industrial Recovery Act (NIRA) of 1933 and Public Works Administration (PWA) .
- * Laws and Executive Orders under FDR.
- * Funding – Without financial backing of the New Deal these would not have been completed.
- * Projects Completed under the New Deal put people to work and infrastructure development.
- * Today and the Future of the IBC New Deal Projects - ARARA Projects.



U.S. IBWC Mission Statement

Our mission is to provide binational solutions to issues that arise during the application of United States - Mexico treaties regarding boundary demarcation, national ownership of waters, sanitation, water quality, and flood control in the border region





Monument #1

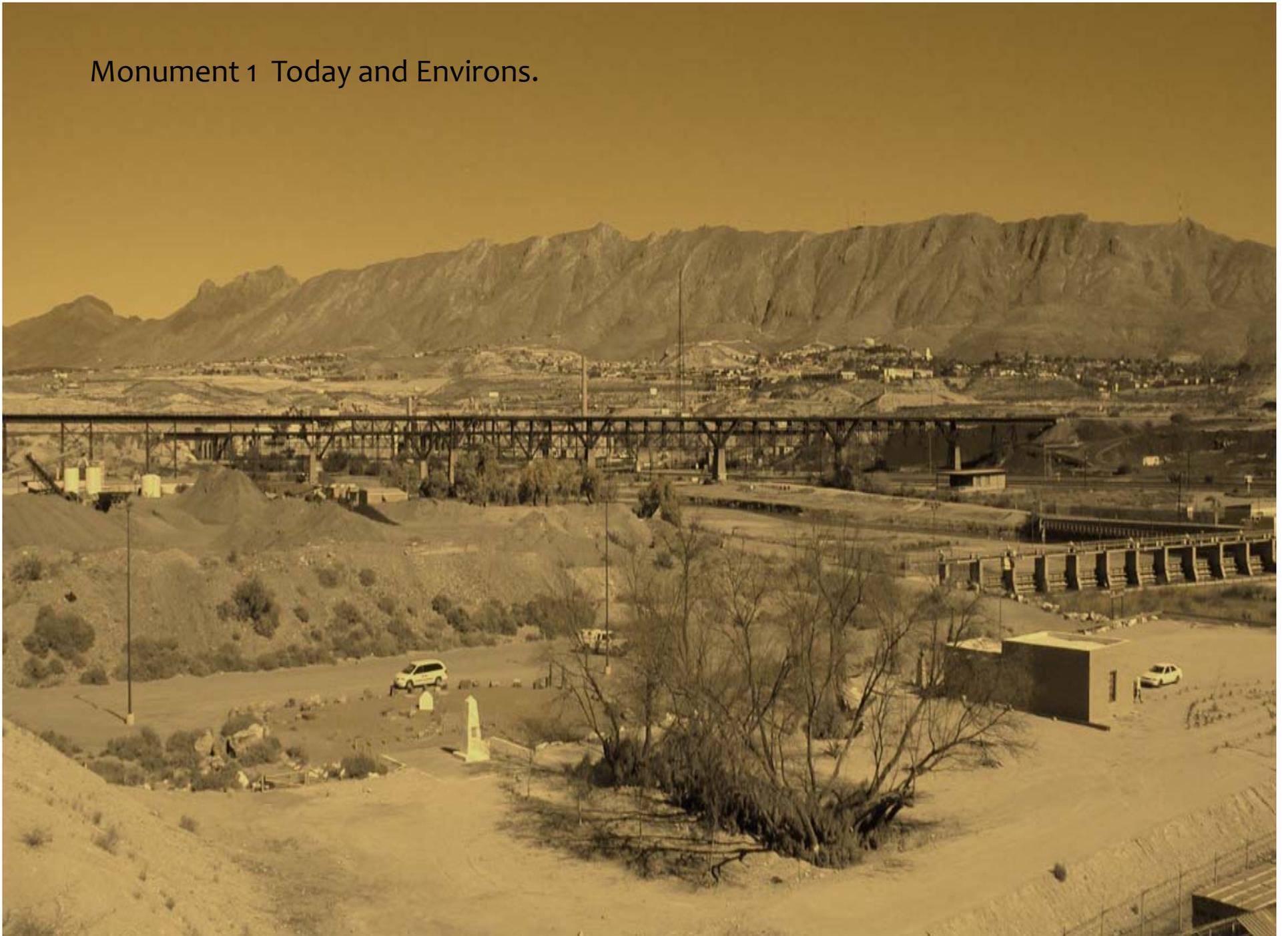
The Monuments

Foot Bridge

Madero's Headquarters near the
© D.W. HOFFMAN
International Boundary.

Francisco I. Madero's headquarters during the Mexican Revolution, La Casita Gris, at Monument 1, 1911. Monument 1 is center left.

Monument 1 Today and Environs.



Today and Yesterday

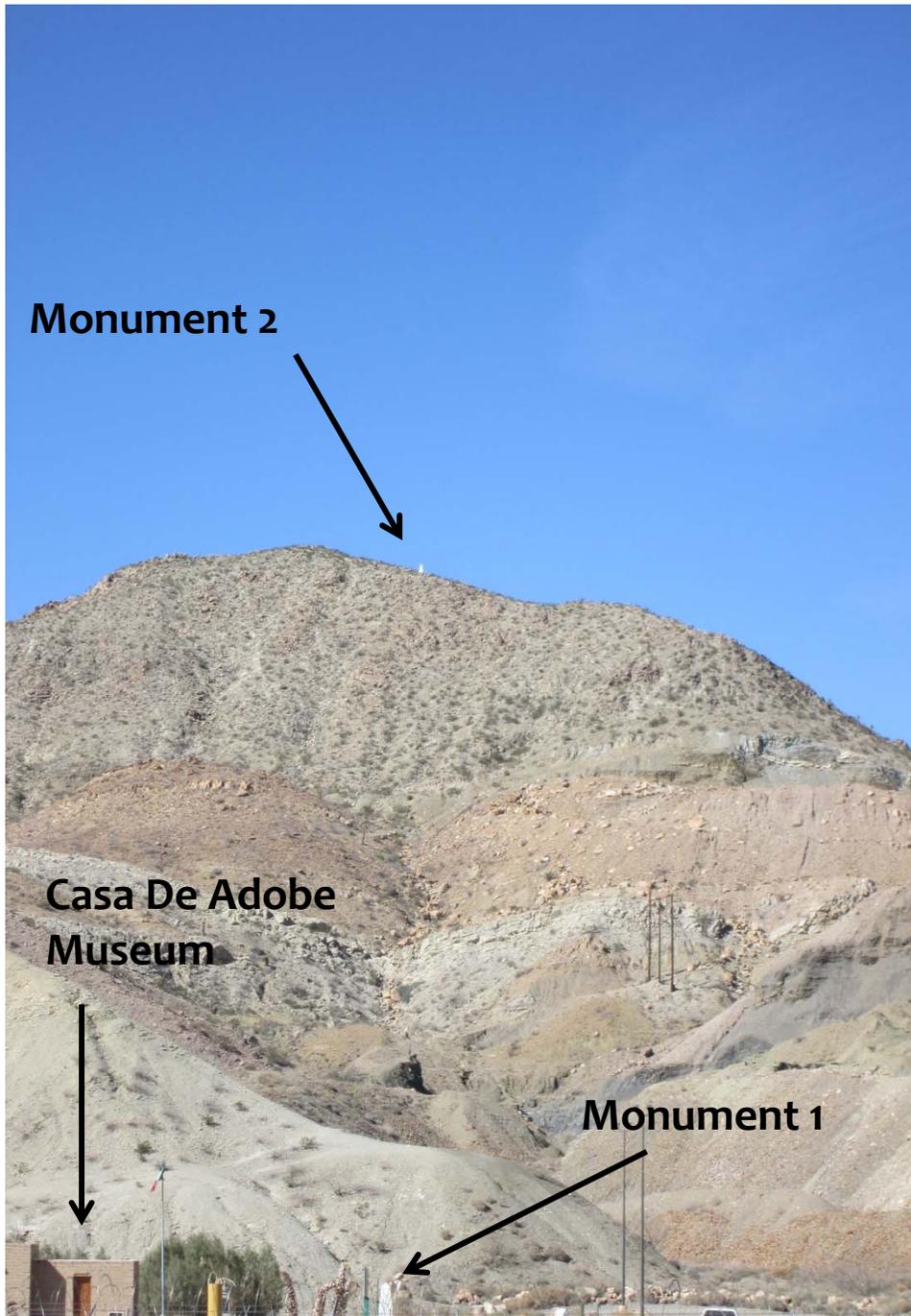


Mexico – Monument 16 (no date, but probably 1850's)

Monument 1 today:
UTEP History Class Visit on 2/13/14



View towards Mexico



The Monuments go from 1 (El Paso) to 258 (San Diego) and there are some intermediate markers to mark the boundary in populated areas that total 276. Monuments 259 – 278 on the land border added in 1900s.

Monuments were placed “line of sight” but over the years are more defined by re-measurement and GPS.



**Monument 1 (1890s)
New Mexico just west of
El Paso, Texas**



**Federal Project 1 – Fixed and
Repainted the monuments.**

**Monument 121
Overlooking Nogales,
Arizona (1890s)**



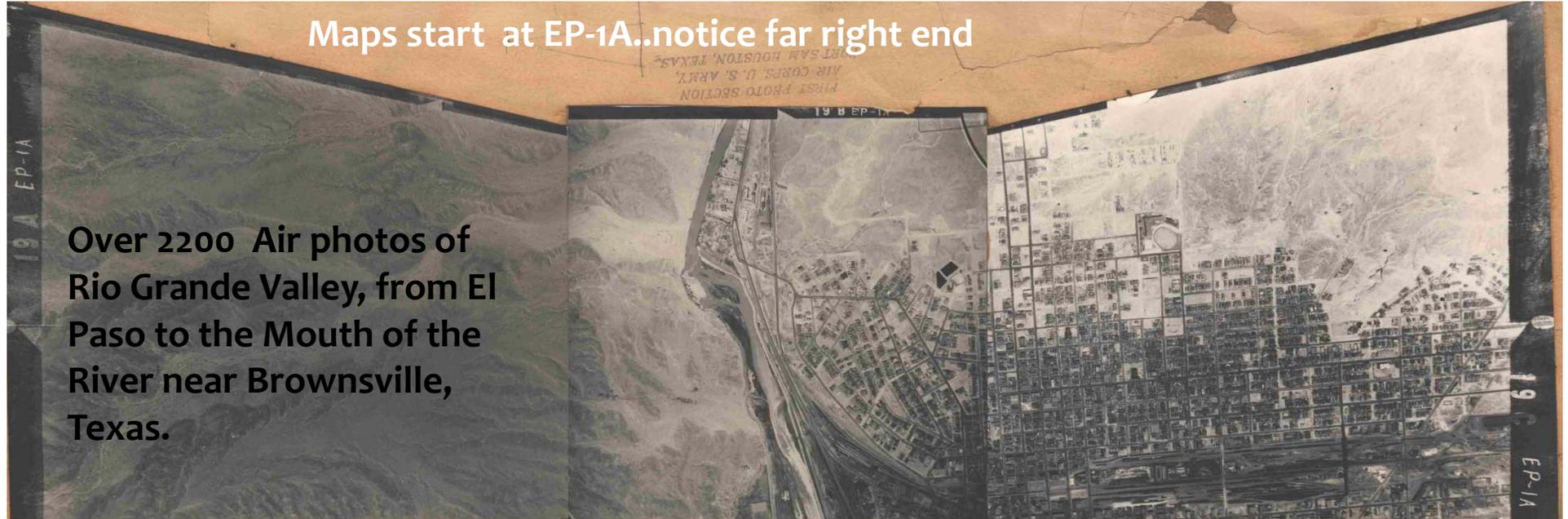
**Monument 258 – San Diego, California
Pacific Ocean in background (1890s)**



The monuments along the border are living sites . A recently discovered article from 1851 suggests a time capsule is under Monument 258 in San Diego.

Maps start at EP-1A..notice far right end

Over 2200 Air photos of Rio Grande Valley, from El Paso to the Mouth of the River near Brownsville, Texas.



1929 Aerial Photomaps

Critical Treaties Between the U.S. and Mexico – Into the New Deal

The Treaty of February 2, 1848 established the United States-Mexico international boundary. The treaty of December 30, 1853 modified the boundary as it exists today.

Treaty of Guadalupe Hidalgo (1848) and Gadsden Purchase (1853).

The Convention of July 29, 1882 established another temporary commission to resurvey and place additional monuments along the western land boundary from El Paso, Texas/Ciudad Juárez, Chihuahua to San Diego, California/Tijuana, Baja California.

Barlow – Blanco Surveys (1891 – 1894)

The Convention of November 12, 1884 established the rules for determining the location of the boundary when the meandering rivers transferred tracts of land from one bank of the river to the other. **Rio Grande and Colorado Rivers Border.**

The Convention of March 1, 1889 established the International Boundary Commission (IBC) to apply the rules in the 1884 Convention and was modified by the **Banco Convention of March 20, 1905** to retain the Rio Grande and the Colorado River as the international boundary.

Critical Treaties Between the U.S. and Mexico – Into the New Deal

The Convention of May 21, 1906 provides for the distribution between the United States and Mexico of the waters of the Rio Grande in the international reach of the river between the El Paso-Juárez Valley and Fort Quitman, Texas. **Equitable Distribution**

The Convention of February 1, 1933, the two governments agreed to jointly construct, operate and maintain, through the IBC, the **Rio Grande Rectification Project**, which straightened, stabilized and shortened the river boundary in the El Paso - Juárez area.

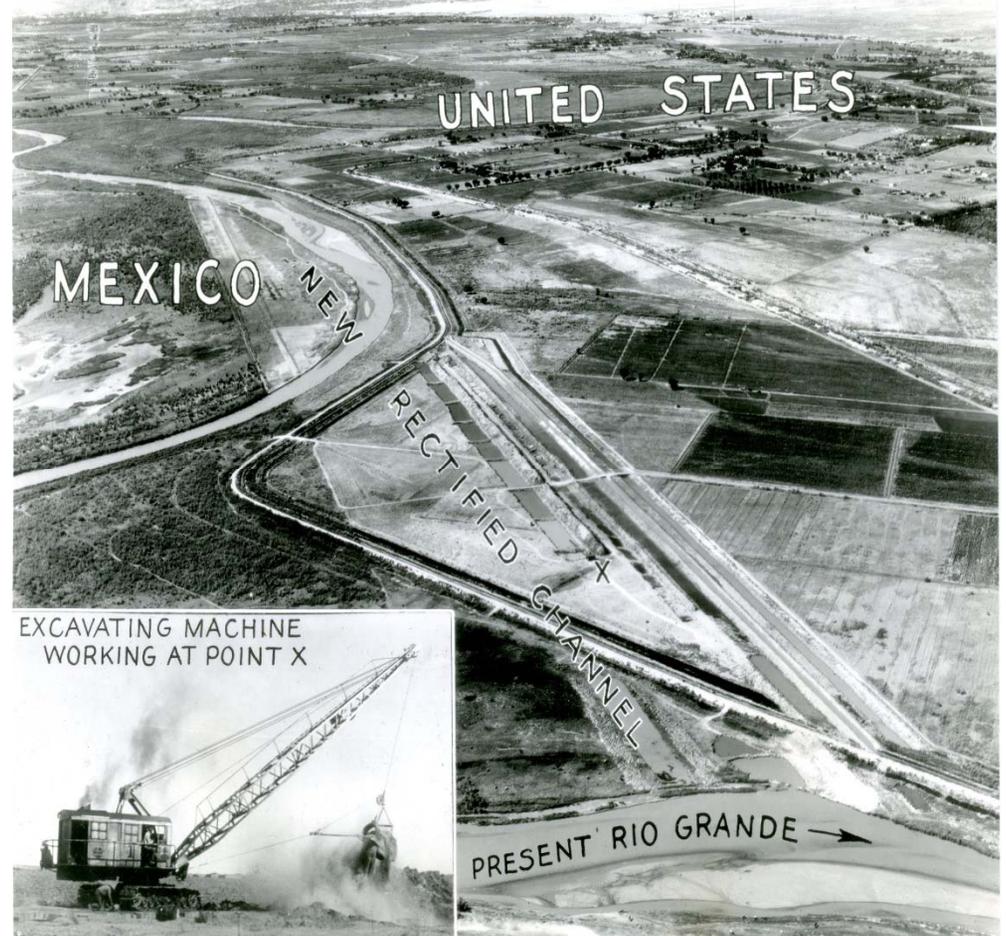
The Treaty of February 3, 1944. Water Treaty for the "Utilization of Waters of Signing of 1944 Treaty the Colorado and Tijuana Rivers and of the Rio Grande" distributed the waters in the international segment of the Rio Grande from Fort Quitman, Texas to the Gulf of Mexico. This treaty also authorized the two countries to construct operate and maintain dams on the main channel of the Rio Grande. The 1944 treaty also changed the name of the IBC to the International Boundary And Water Commission (IBWC), and in Article 3 the two governments entrusted the IBWC to give preferential attention to the solution of all border sanitation problems.



Minutes of the IBC



- * The first Minute was October 3, 1922, but did not deal with New Deal projects; this was simply an Exchange of Credentials by both sections of the Commission.
- Minute 26 of February 17, 1924 on Rectification of the Rio Grande. Other Minutes later dictated actions as to Rectification (Minute 33, 35, 36, etc.). **Minute 128** on July 28, 1930 was for development of the final plans, but funding was not discussed in the minute. **Minute 129** later went into detail as to costs and what was to be completed for Rectification.
- By June 14, 1934, Minute No. 144 was signed for Rectification to proceed and with funding. This was based off the Minute 129 agreement.





National Industrial Recovery Act (NIRA) of 1933

- * FDR's Election in November 1932.
 - * National Industrial Recovery Act. Effective June 16, 1933.
 - * Title II established the Public Works Administration (PWA) which funded the IBC projects.
 - Title I of Act later ruled unconstitutional in 1935.
- Note: The Works Progress Administration (WPA) was formed under Executive Order on 5/6/1933 but not part of the IBC projects funding.

- * Rectification and Canalization of the Rio Grande
- * Border Monuments repair and repainting
- * American Dam and Canal
- * New border monuments along the Rio Grande south of El Paso along the border to the Gulf of Mexico
- * Lower Rio Grande Flood Projects
- * Nogales and Tijuana Sanitation and Flood Control Projects

New Deal Projects

August 19, 1935 (49 Stat. 660; amended 49 Stat. 1370)

660 74TH CONGRESS. SESS. I. CH. 561. AUGUST 19, 1935.

[CHAPTER 561.]

AN ACT

August 19, 1935.
[H. R. 6463.]
[Public, No. 286.]

To amend the Act of May 13, 1924, entitled "An Act providing for a study regarding the equitable use of the waters of the Rio Grande", and so forth, as amended by the public resolution of March 3, 1927.

Rio Grande, etc.,
Rivers.
Vol. 43, p. 118; Vol.
44, p. 1403, amended.
Post, p. 1317.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Act of May 13, 1924, entitled "An Act providing for a study regarding the equitable use of the waters of the Rio Grande below Fort Quitman, Texas, in cooperation with the United States of Mexico", as amended by the public resolution of March 3, 1927, is hereby amended to read as follows:

Study of equitable
use of waters of.

"The President is hereby authorized to designate the American Commissioner on the International Boundary Commission, United States and Mexico, or other Federal agency, to cooperate with a representative or representatives of the Government of Mexico in a study regarding the equitable use of the waters of the lower Rio Grande and the lower Colorado and Tia Juana Rivers, for the purpose of obtaining information which may be used as a basis for the negotiation of a treaty with the Government of Mexico relative to the use of the waters of these rivers and to matters closely related thereto. On completion of such study the results shall be reported to the Secretary of State.

Purpose.

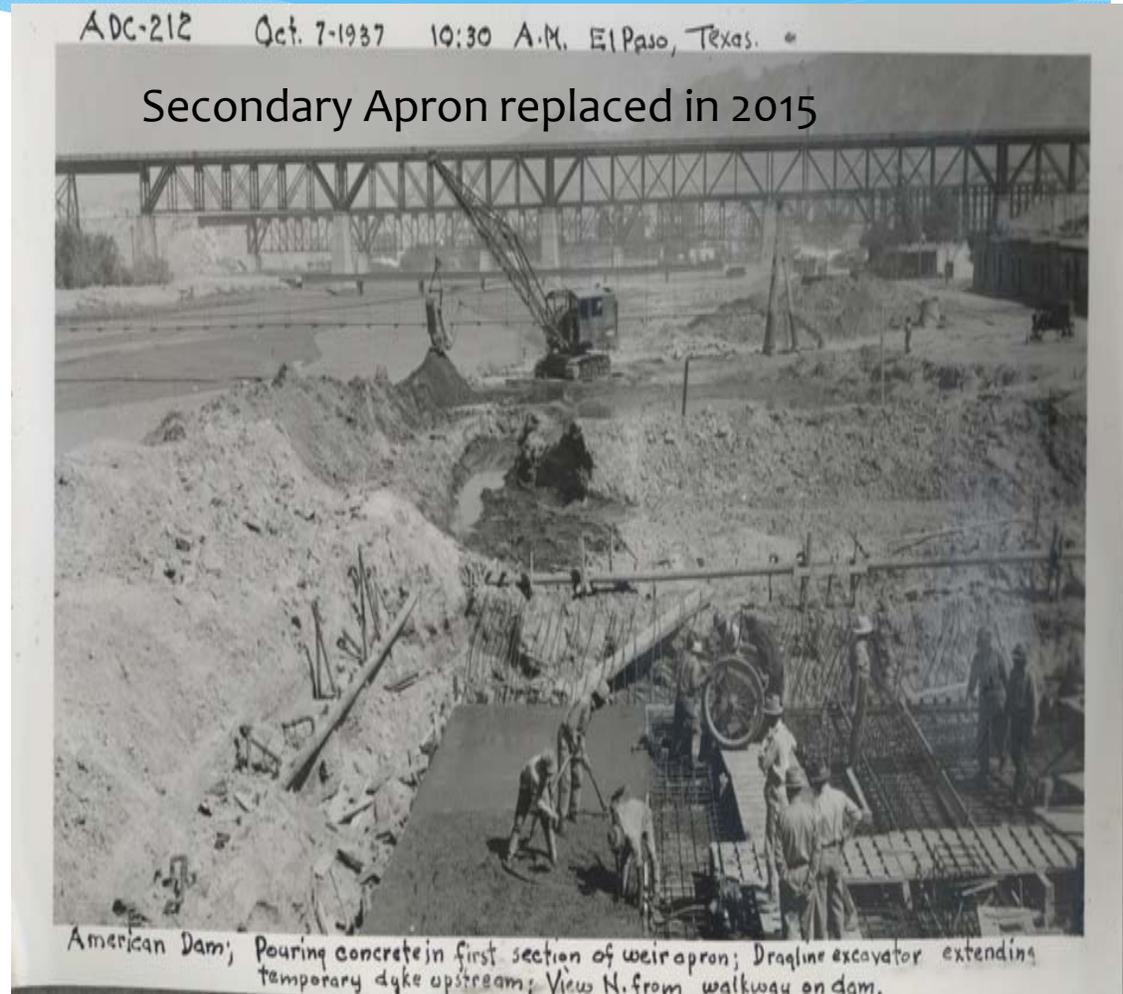
Report to Secretary
of State.

- * This law allowed individual provisions for eventual demarcation, fencing, or monumentation with flood control, sanitation issues and public utility projects along the border.
- * This act put into motion many stalled projects that were called for under the previous treaties but never completed or funded until now, unfortunately because of the Great Depression.
- * Preceded by Executive Order 6575-A, on 1/24/1934 for Secretary of State to acquire by purchase or by the power of eminent domain, any real or personal property in connection with the construction of any project under allocations.

Multi-State Projects: American Diversion Dam and Canal

Based on the Convention of 1906 for the Equitable Distribution of Waters in the Rio Grande River.

- * August 29, 1935 (49 Stat. 961) and June 4, 1936 (49 Stat. 1463) Acts.
- * Built from 1937 to 1938
- * Provided for construction of the American Dam and associated buildings in El Paso and for the Canalization of the Rio Grande from Caballo Reservoir in New Mexico to the International Dam near El Paso, Texas. A portion of Minute 129 with Rectification.



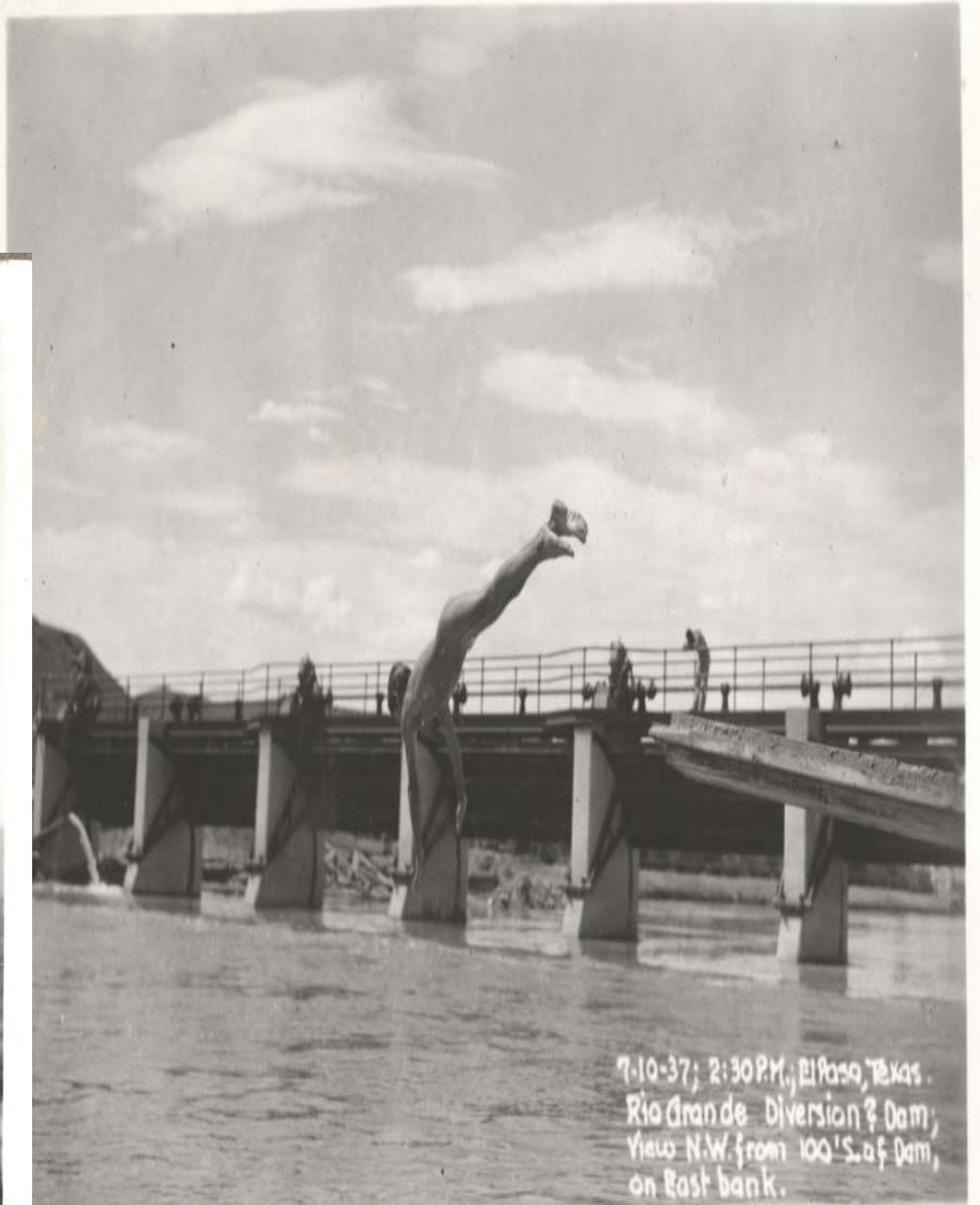
* To separate Rio Grande waters allocated to each country in the El Paso – Juárez Valley equitably

ADC-6 Dec. 1, 1936 4:10 P.M. El Paso, Texas

See ADC-1575 for comparison



American Canal; View of loc. S. from 200'± E of Sta. 7S1; Wuerthman Property in middle distance.



7-10-37; 2:30 P.M.; El Paso, Texas.
Rio Grande Diversion Dam,
View N.W. from 100' S. of Dam,
on East bank.

ADC-1112

ADC-72

March 31-1937

4:10 P.M. El Paso, Texas.



American Canal; View N. from Sta. 102+50 (Hart's Road).

ADC-134

May 31-1937

10:30 A.M. El Paso, Texas.



American Dam; completed section and W. coffer-dam; View S.E.



ADC-144

June 22-1937 A.M.; El Paso, Texas



ADC-157

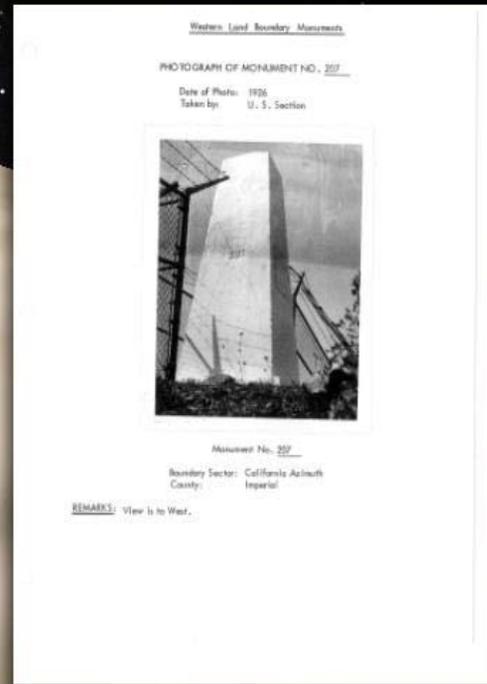
July 15-1937 10:00 A.M. El Paso, Texas.



American Canal; Conduit Sec. "B"; View N. from flume at Sta. 79+75.

Federal Project 1 (FP-1): Resetting and Repainting the Land Monuments

Project completed from November, 1933 to March 15, 1934. Monuments were reset and repainted by the American Section of the IBC.

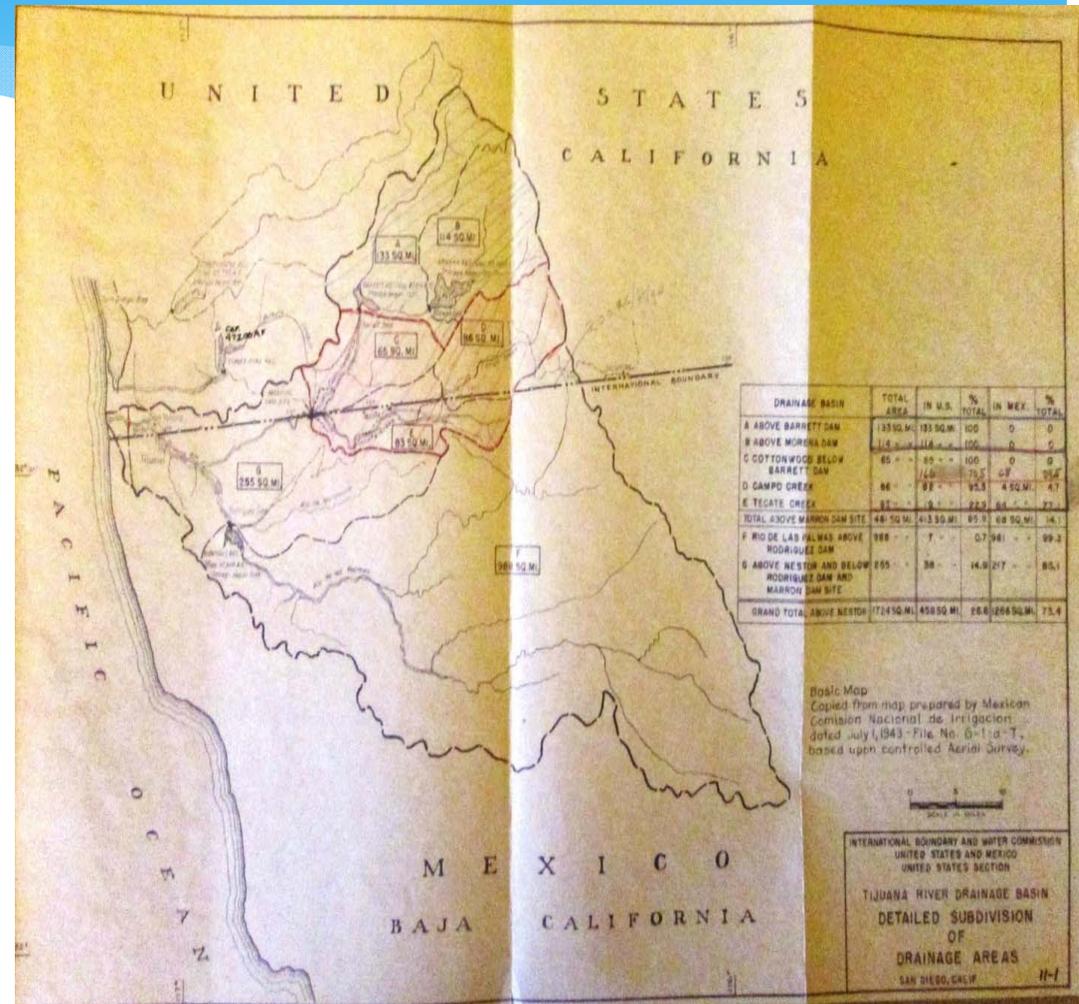


Total cost was \$1,500.00 under Appropriation 1-03/5640.4, with Lower Rio Grande Valley Flood Control Project (FP-2) funding.



Tijuana Valley Sanitation Project: California

- * Started July 1937 and finished on March 22, 1938.
- * To relieve an international sewage problem in the Tijuana Valley of the U.S. and Mexico.
- * Installed sewer lines, trunk lines and an outfall which discharges into the ocean sewage collected in the cities of San Ysidro, California and Tijuana, Baja California.
- * The project expenses were \$152, 264.08 at completion.



Nogales Flood Control Project (FP-3): Arizona

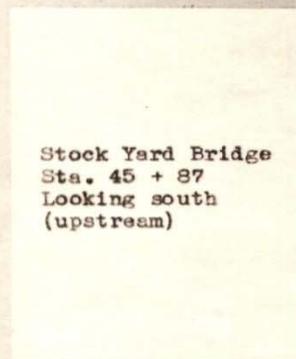
- * Constructed 1933 to 1936.
- * Nogales, Arizona and Nogales, Sonora, Mexico
- * Construction began on January 2, 1936 and finished July 3, 1936
- * By its completion in July, 1936, and the closing of the books on August 1, 1936, the total cost was \$547,925.08
- * Mexican section was completed in 1936 and was finished almost entirely by hand labor with about 300 men being employed
- * Completed in tandem with Mexico
- * 1-5/8 miles of floodwater conduit beginning at the International boundary, where it connected with the Mexican conduit
- * Floodwater conduit of 5,302'8" in length, of which part of this is a reinforced concrete box and nearly the last 1000' is open channel

NOGALES FLOOD CONTROL PROJECT
UNIT NO. 4



Highway Bridge
Sta. 35 + 75
Looking north
(downstream)

Photo No.1



Stock Yard Bridge
Sta. 45 + 87
Looking south
(upstream)

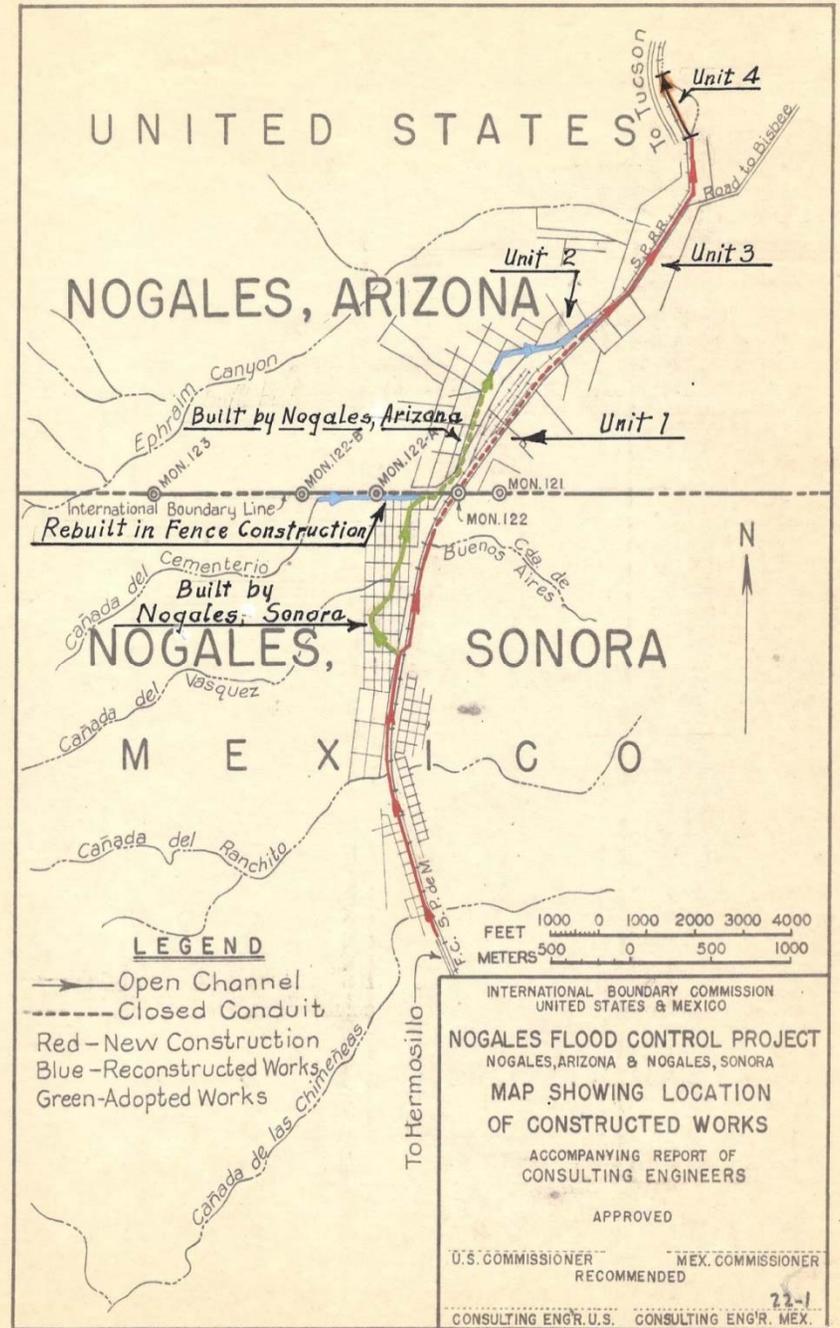


Photo No.3



View of completed
channel. Looking
downstream from
Stockyard Bridge.

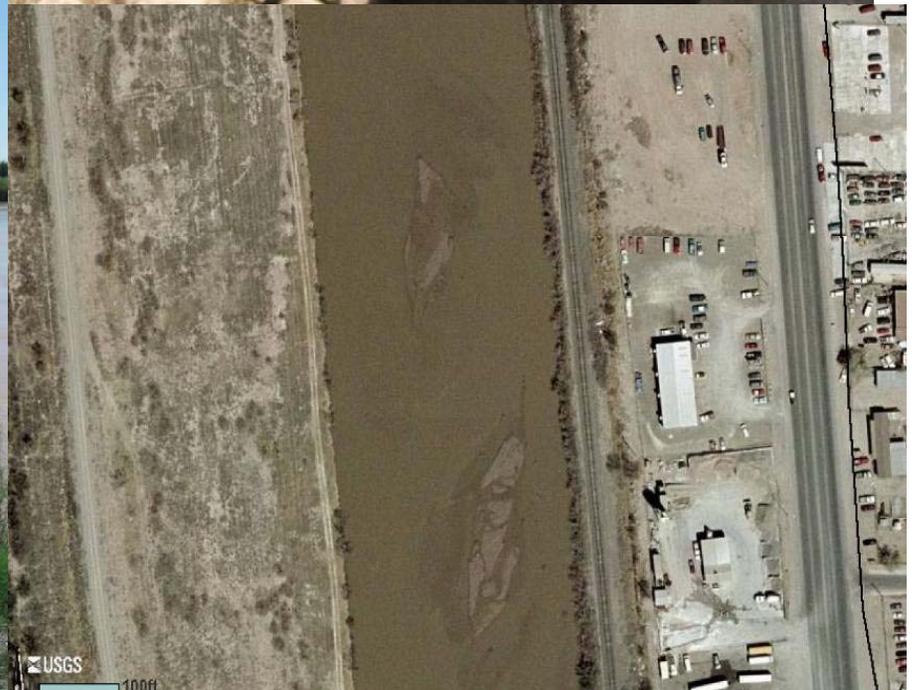
Photo No.4



Canalization – New Mexico to Texas

- * Rio Grande from Caballo Reservoir in New Mexico to the International Dam near El Paso, Texas
- * April 22, 1940 Act (54 Stat. 151) for replacement or reconstruction of bridges over the Rio Grande
- * Constructed 1938 to 1943
- * 105.4 miles of construction in New Mexico. In Dona Ana County, NM, and west Texas, this was about 93 miles of levees from Percha Diversion Dam in Sierra County, NM to American Diversion Dam (American Dam) in El Paso County, Texas

* Mesilla Valley Widening Program with Project Construction had cost \$2,996,052.11. A total of 2,749,192 man hours with an average of 220 employees at work



EXCAVATION - DRAGLINES

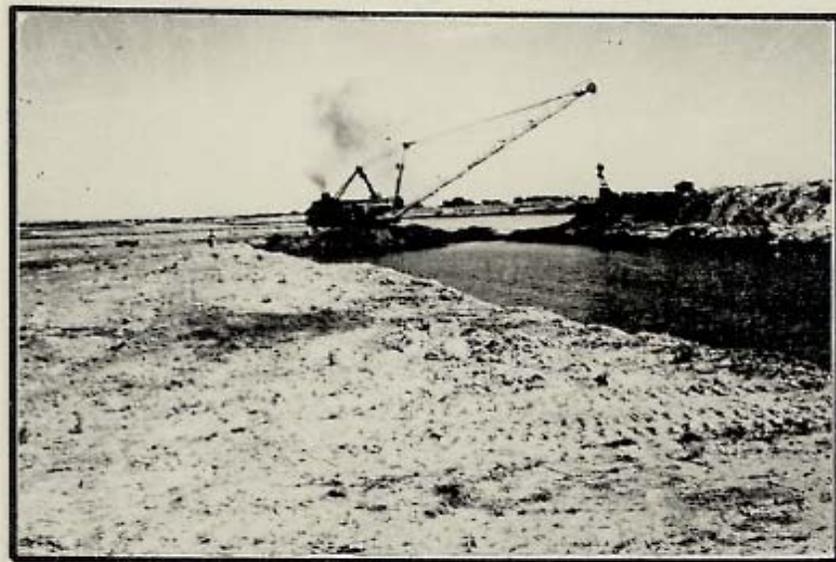
-104-



DRAGLINE No. 3 - Building levee



DRAGLINE No. 6 - Opening Jundt
Cut-off



DRAGLINE No. 6 - Excavating Channel
Cut-off



DRAGLINE No. 5 - Crossing river
north of Berino Bridge

Rectification of the Rio Grande (FP-4): Minute 129

- * Plans in 1920s to Rectify the channel.
- * Minute No. 129, signed in Mexico City, Mexico on July 31, 1930 approved the final plans for Rectification
- * FDR signature on November 13, 1933
- * Construction from 1934 to 1938.
- * Flood control levees between El Paso and Fort Quitman, Texas.



Looking Downstream from Point above El Paso and Juárez. International Boundary Commission, 1935

- * Began from Monument 1 at El Paso and continued south to the Box Canyon below Fort Quitman, Hudspeth County Texas approximately 92.4 miles

- * Rectification and Caballo Dam construction were approximately \$6,000,000.00 with 3.8 million man-hours of (physical) employment



Fabens – Caseta International Bridge

- * Construction started on March 14, 1938 and completed on June 30, 1938 for a cost of \$30,868.58, far below the \$100,000 originally obligated for construction.
- * Fort Hancock Bridge was built at the same time as the Fabens Bridge and finished in 1938.
- * **Note:** Fabens Bridge will be demolished this year or next.

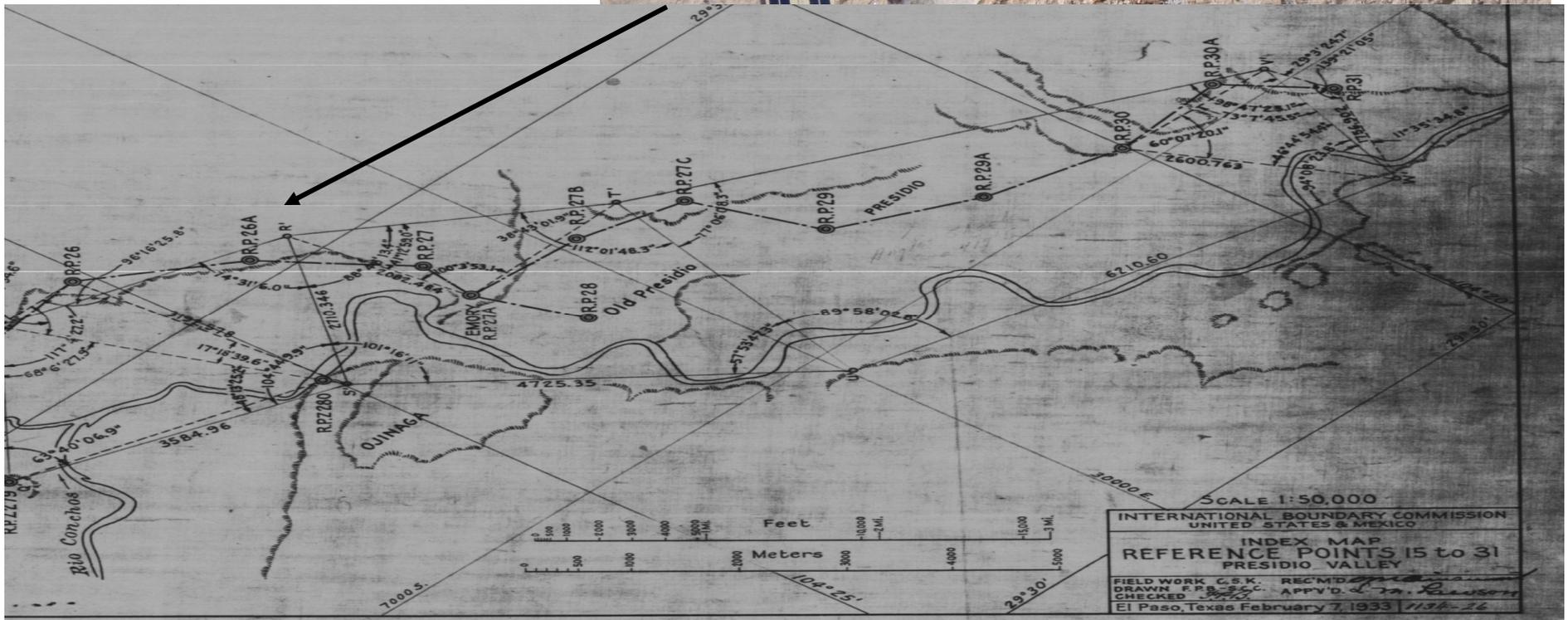


River Monuments

Index Map with Reference
Point 26A in the Presidio Valley.
International Boundary
Commission, February 7, 1933

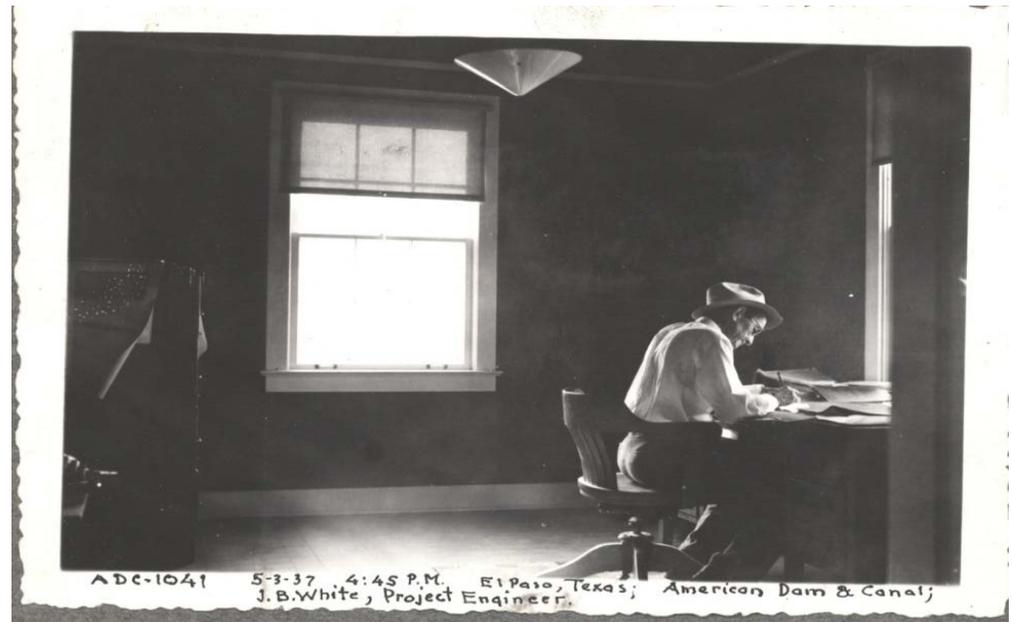


A concrete
marker with an
“IBC + CDE L”
cast metal plate,
Reference Point
(R.P. 26A), located
north of Presidio,
Texas.



Lower Rio Grande Flood Control: FP-2

- * Part of the Convention of March 1, 1889
- * Appropriation Warrant No. 31, on August 3, 1933 for \$1,501,500 under appropriation title: 1-03/5640.4. This was for \$1,500,000 total (FP-2)
- * From the town of Penitas, Texas to the Gulf of Mexico, a distance of 180 miles
- * Structures installed in the floodways consist of 31 timber bridges, 652 irrigation and drainage structures and 411 cattle guards





Conclusions

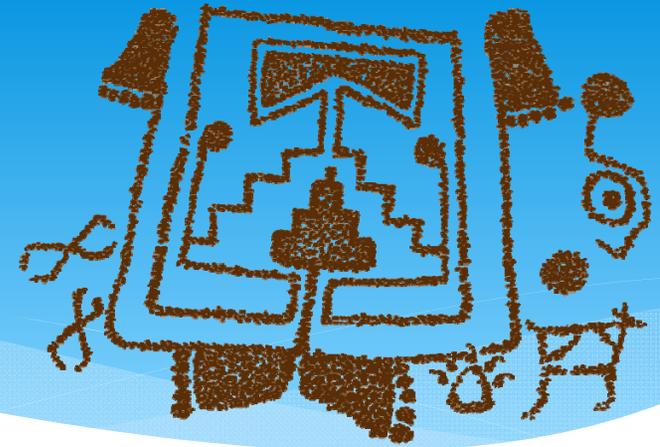
- * Projects were under Treaties ,Conventions and Minutes of the IBC.
- * Great Depression stimulated Government intervention and money for completion and to put people to work.
- * These projects were conducted under funds from agencies such as the Public Works Administration (PWA), and others financed under the New Deal programs with the majority under the National Industrial Recovery Act (NIRA) of 1933

The New Deal Acts were designed to put Americans to work in projects that would instill hope and economic prosperity back into a devastated American populace. This analysis of the IBC during the New Deal has filled in the gaps of the Lawson Administration that seemed to have been forgotten as a product of the Great Depression, not a consequence of it.

This presentation has demonstrated that the New Deal projects of the IBC were and are still viable today as when they were built in the 1930s and that American social and economic might along the border was never down and out, but simply dormant until reawaked by the Great Depression. The New Deal was instrumental to the IBC for it funded and constructed the treaty projects.



ARARA

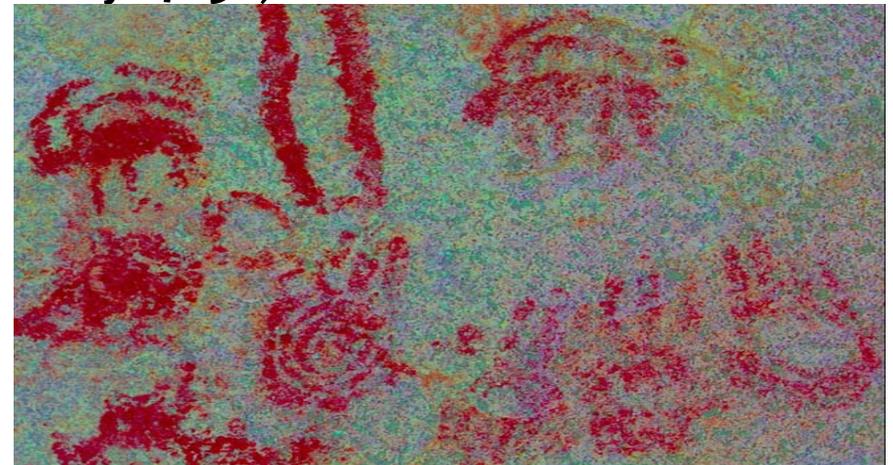


Implementing the American Recovery and Reinvestment Act of 2009

The Recovery Act includes \$220,000,000 for the IBWC for immediate repair and rehabilitation requirements in the water quantity program. These funds are available for obligation through September 30, 2010 and will be used for immediate infrastructure upgrades along 510 miles of flood control levees to rehabilitate the Rio Grande Flood Control System.

American Rock Art Research Association

**ARARA 2016 Conference
Ramada Las Cruces Hotel and
Conference Center
Las Cruces, New Mexico
May 27–30, 2016**



“New Deal” Projects 2015



**American Dam Secondary Apron,
West view before demolition of
Apron.**



**Emplacement of rock Riprap replacing
concrete Secondary Apron. View
towards East.**

American Canal Replacement



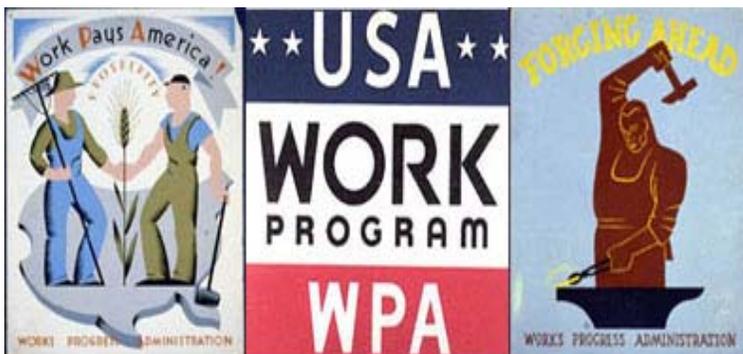
Box Culvert and area, facing south towards Rio Grande River.



Box Culvert and area, facing north towards Border Fence.

Acknowledgments

- * My MA Committee of Dr. Jeffrey P. Shepherd, Chair and Dr. Brad J. Cartwright and Dr. Ann R. Gabbert
- * The USIBWC for allowing me to write about the New Deal and the Agency and its history.
- * Gilbert Anaya, Chief of Environmental Management Division and my co-workers for support.
- * USIBWC, CCC Legacy, Livinginnewdeal.org for permissions of Photos.
- * I dedicate this to my father, Merlin Howe, for inspiration and Grandfather, Frank Lee Howe, who worked in the WPA in the 1930s in Nebraska. My grandfather said, “Roosevelt gave him a job and not just a paycheck, but self-esteem for a days work.”





1944 Water Treaty – Rio Grande

- Mexico delivers water to the U.S. from Ft. Quitman to Gulf
- U.S. receives 1/3 of the waters arriving in the Rio Grande from 6 Mexican tributaries
- Minimum annual average of 350 kaf in cycles of 5 years
- Treaty authorized construction of up to three storage dams on Rio Grande; only 2 were built



Rio Grande at Ft. Quitman



1944 Water Treaty – Colorado River



Colorado River at the border

- U.S. to deliver to Mexico a volume of 1.5 maf/yr
- When there are surplus waters, U.S. to deliver to Mexico a total volume of up to 1.7 maf/yr
- In extraordinary drought, Mexico reduced in proportion to U.S.



1970 Boundary Treaty

- IBWC to maintain Rio Grande and Colorado River as the boundary
- Boundary is middle of the channel occupied by normal flow or middle of the channel with greatest average width over its length
- IBWC delineates boundary on maps
- IBWC may stabilize or rectify the channel (numerous rectifications carried out)
- Prohibits construction of works that would obstruct or deflect normal or flood flows



Rio Grande at Los Ebanos



IBWC Structure

TREATY OFFICERS

U.S. SECTION

- Commissioner
- Secretary
- 2 Principal Engineers
- Legal Advisor

MEXICAN SECTION

- Commissioner
- Secretary
- 2 Principal Engineers
- Legal Advisor



IBWC Minutes

- Decisions of the Commission are recorded in the form of Minutes.
- Minutes are binding agreements of the IBWC intended to implement treaty.
- They take effect once approved by the U.S. Department of State and Mexico's Foreign Affairs Ministry



IBWC Commissioners and Secretaries sign Min. 319



Field Offices

San Diego Yuma Nogales Up. Rio Grande Presidio Amistad Falcon L. Rio Grande





Sanitation

- 1944 Treaty authorizes Commission to give “preferential attention to the solution of all border sanitation problems”
- 3 international wastewater treatment plants
 - Nogales
 - South Bay
 - Nuevo Laredo



Nogales IWTP



Amistad Dam

- Located at Del Rio, TX-Cd. Acuña, Coahuila
- Built in 1969
- Impounded Rio Grande extends for 75 miles, covers 65,000 acres
- Normal conservation capacity of over 3 million acre-feet



Amistad Dam



Falcon Dam

- Located at Falcon Heights, TX-Nva. Cd. Guerrero, Coah.
- Built in 1954
- Reservoir covers 78,300 acres at conservation capacity
- Normal conservation capacity of 2.6 million acre-feet



Falcon Dam



Flood Control



- **4 USIBWC Flood Control Projects**
 - **Tijuana River** – San Diego, CA
 - **Upper Rio Grande** – Southern New Mexico and West Texas
 - **Presidio** – Big Bend area of Texas
 - **Lower Rio Grande** – near McAllen, Harlingen, Brownsville
- USIBWC maintains flood control levees, tracks flow, operates diversion dams in coordination with Mexico



Presidio levee during 2008 flood



Lower Rio Grande Flood Control



Anzalduas Dam in 2007



Retamal Dam on July 18, 2010



Levee Construction



INTERNATIONAL BOUNDARY AND WATER COMMISSION,
UNITED STATES AND MEXICO
UNITED STATES SECTION



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