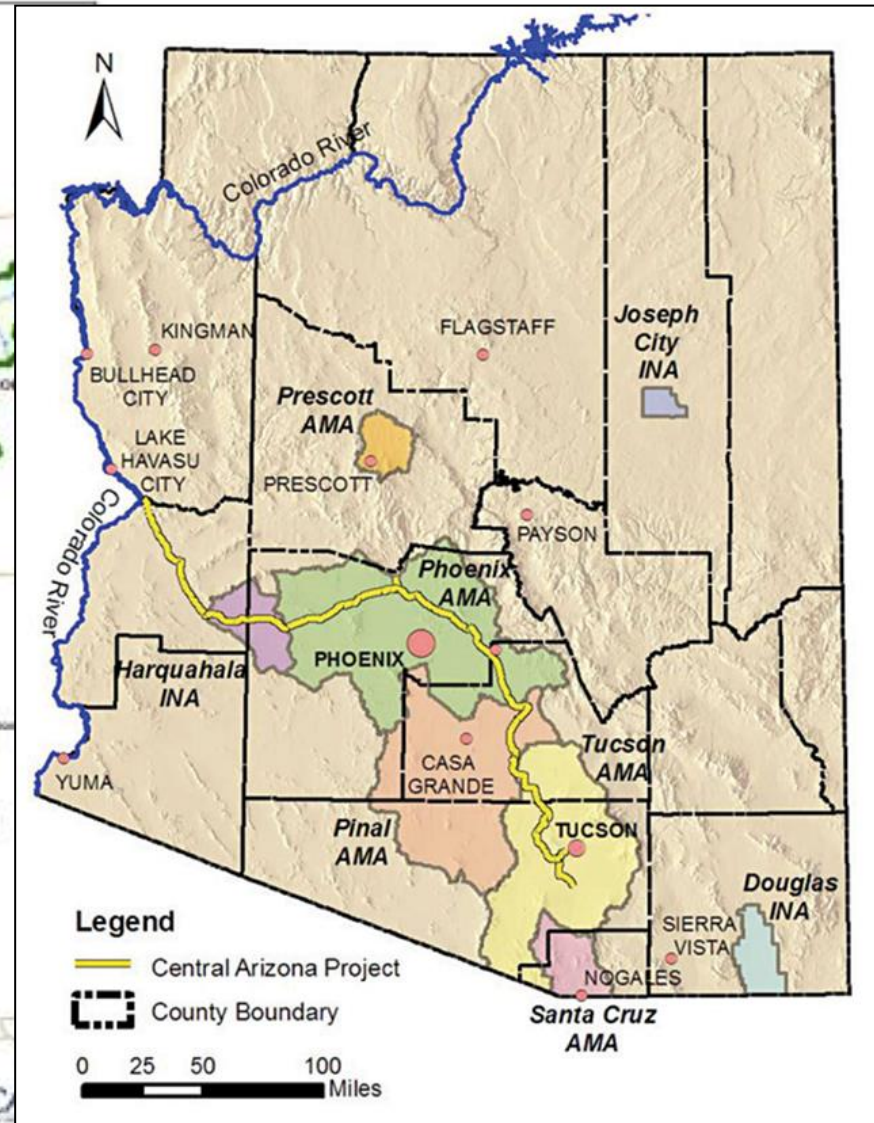




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# Panel 1 Question 1 Climate and Groundwater Sharon B. Megdal



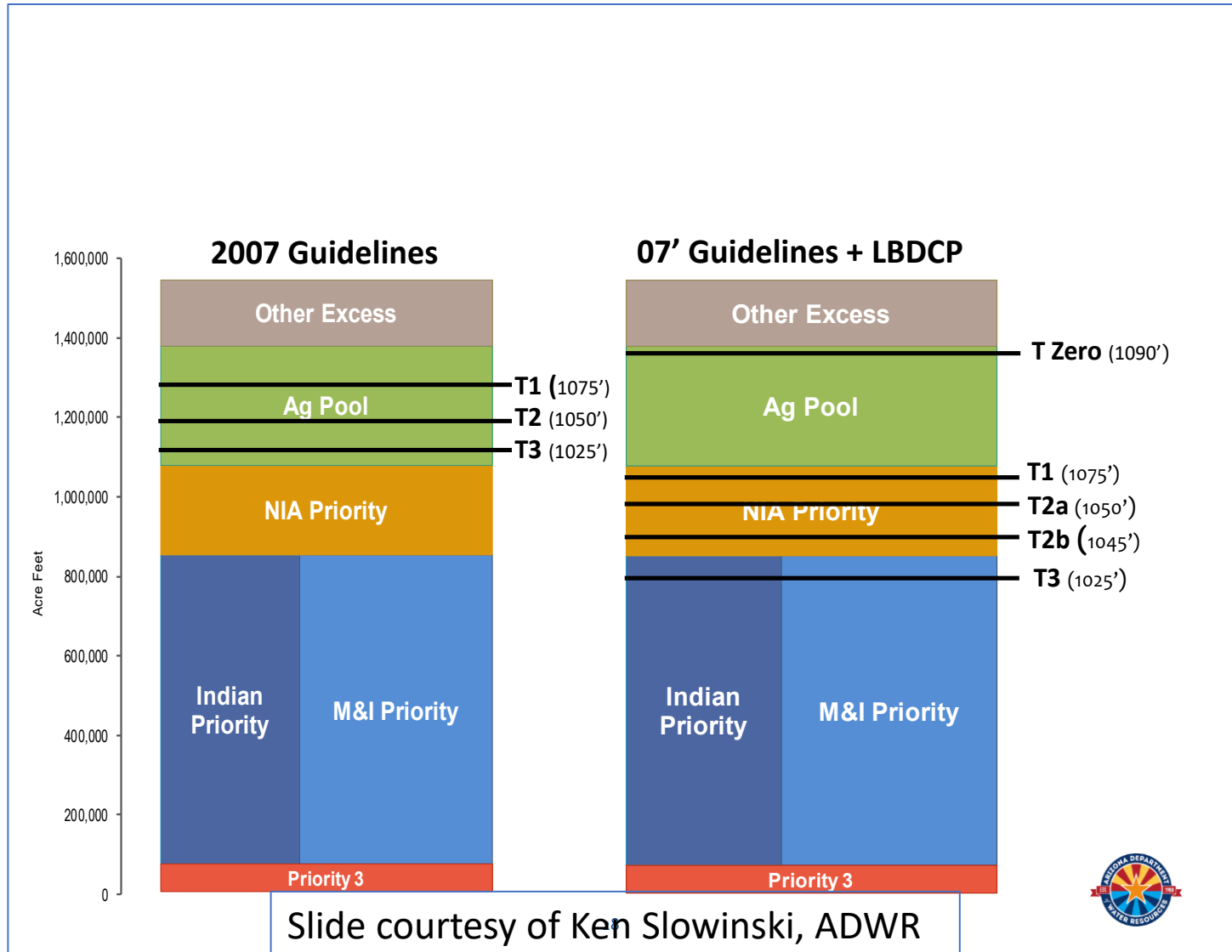


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May 20, 2019 Lake Elevation 1087.7 Ft.



Slide courtesy of Ken Slowinski, ADWR





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# **Panel 1 Question 2 Novel Hydro-diplomacy Sharon B. Megdal**



English Text of Minute 242

INTERNATIONAL BOUNDARY AND WATER COMMISSION  
UNITED STATES AND MEXICO

Mexico, D.F.  
August 30, 1973

MINUTE NO. 242

PERMANENT AND DEFINITIVE SOLUTION TO THE  
INTERNATIONAL PROBLEM OF THE SALINITY OF THE COLORADO RIVER

MINUTE NO. 323

Ciudad Juarez, Chihuahua  
September 21, 2017

EXTENSION OF COOPERATIVE MEASURES  
AND ADOPTION OF A BINATIONAL WATER SCARCITY CONTINGENCY PLAN  
IN THE COLORADO RIVER BASIN



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# Panel 1 Question 2 Sharon B. Megdal

### Earthquakes and Irrigation in the Mexicali Valley

**Charles M. Burt, Ph.D., P.E., CID, CAIS**

Chairman, Irrigation Training and Research Center (ITRC), California Polytechnic State University (Cal Poly), San Luis Obispo, CA 93407. [cburt@calpoly.edu](mailto:cburt@calpoly.edu)

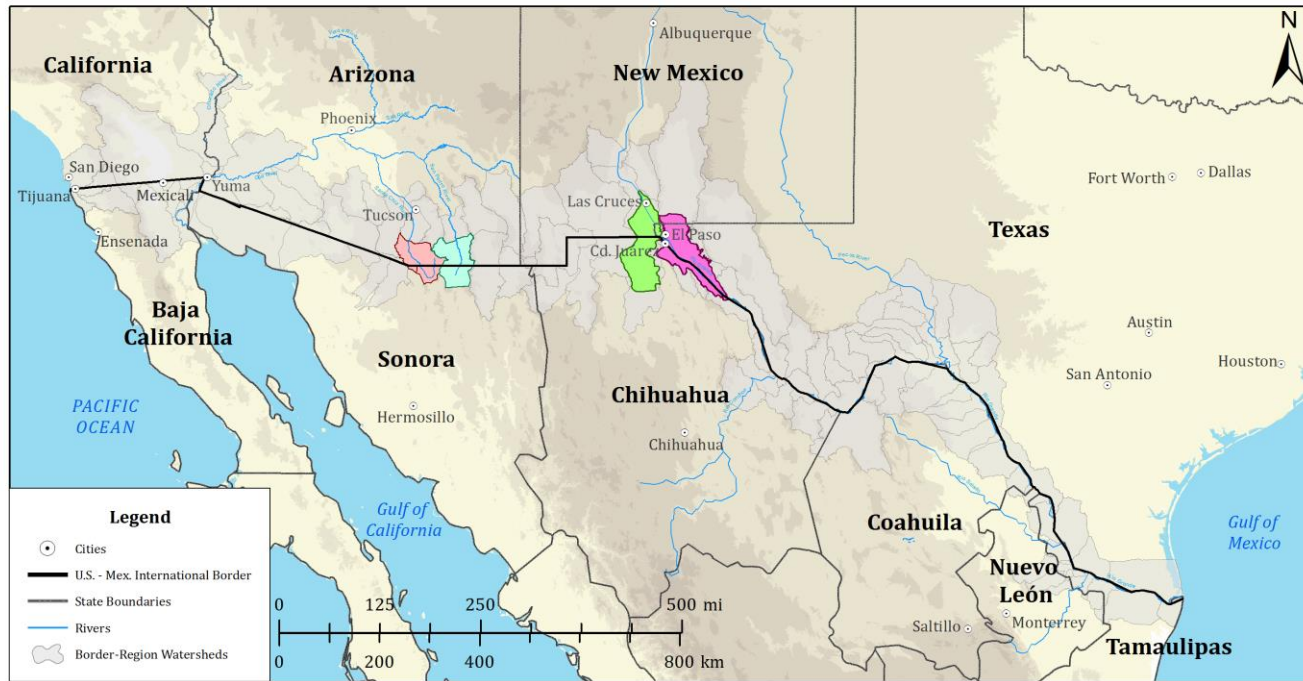


Figure 10. Fissures in the embankment road. Photo courtesy of CONAGUA.

The modulos that suffered the most damage were Modulos 10, 11, and 12 (see Figure 11). The irrigation water to these modulos was supplied by the concrete-lined Nuevo Delta Canal (about 15 miles long), which was in turn supplied by the Reforma Canal, which receives its water from the Colorado River at Morelos Dam (Presa Morelos on Figure 11). The Nuevo Delta Canal was almost completely destroyed.



### Transboundary Aquifer Assessment Program Aquifers of Focus



### INTERNATIONAL BOUNDARY AND WATER COMMISSION UNITED STATES AND MEXICO

El Paso, Texas  
August 19, 2009

### JOINT REPORT OF THE PRINCIPAL ENGINEERS REGARDING THE JOINT COOPERATIVE PROCESS UNITED STATES-MEXICO FOR THE TRANSBOUNDARY AQUIFER ASSESSMENT PROGRAM

To the Honorable Commissioners,  
International Boundary and Water Commission,  
United States and Mexico,  
El Paso, Texas and Ciudad Juarez, Chihuahua.

Sirs:

We respectfully submit for your consideration this Joint Report recommending the joint cooperative process between the United States and Mexico to implement an assessment program for the transboundary aquifers shared by both countries.

#### I. Background

Since the decade of the 1970s, there exists within the framework of the International Boundary and Water Commission (IBWC), a process for the exchange of information on groundwater along the border between the United States and Mexico. Any issues of data or studies have been addressed on a case by case basis through mutual consultation as established in Resolution 6 of IBWC Minute No. 242.

By way of example, on December 2, 1997, the IBWC issued the "Joint Report of Principal Engineers Regarding Information Exchange and Mathematical Modeling in the El Paso, Texas and Ciudad Juarez, Chihuahua Area Aquifer." The IBWC arranged for the exchange of groundwater data between both countries and the development of a bilingual publication that was produced jointly under this effort.

On December 22, 2006, United States Public Law 109-448, the "United States-Mexico Transboundary Aquifer Assessment Act" was passed, establishing a program to evaluate transboundary aquifers between the United States and Mexico, which included the possibility of applying United States funds for assessment activities in Mexico.

#### II. International Boundary and Water Commission's Position and Process Framework

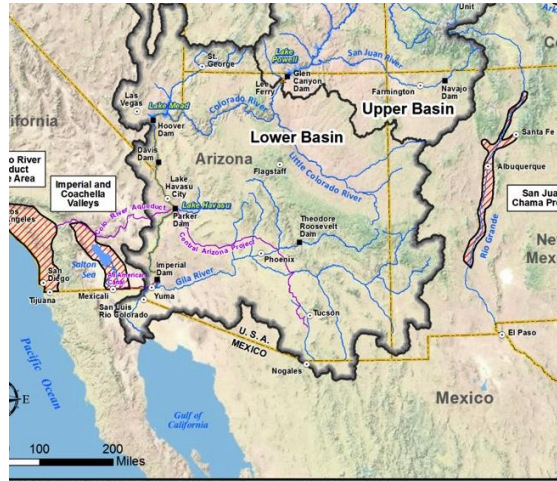
The IBWC, United States and Mexican Sections, are aware of the interest on both sides of the border to preserve and understand the aquifers used by both countries, whereby it is considered necessary to develop a team of binational experts to assess transboundary aquifers, exchange data, and if needed, develop new datasets.

Initiatives that include transboundary water resources are traditionally coordinated through the IBWC using the customary binational cooperation process used by both



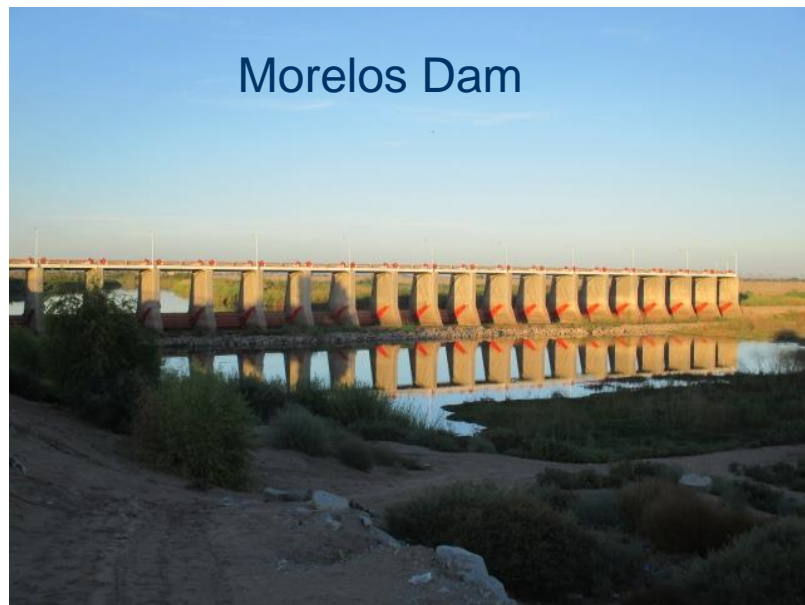
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# Panel 1 Question 3 water-energy-food- climate-people nexus Sharon B. Megdal





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### **2014 Pulse Flow**

- Occurred March 23rd – May 18th, 2014.
- Designed to mimic, at a reduced scale, spring floods that affected the Colorado River Delta for years. Cottonwoods and willows were producing seeds during that time, and those seeds need to land on wet ground to germinate and support restoration goals of the Pulse Flow.



# **Panel 1 Question 3 Sharon B. Megdal**

### **Renewal – A Reborn Colorado River Once Again Finds Her Path to the Sea**

<http://youtu.be/TODV7FW746s>





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# Panel 1 Question 4 Challenges to water security Sharon B. Megdal



## 2020 Lake Powell Unregulated Inflows

The monthly inflows early in the runoff season (April – June) were about half of the 30-year Historical Average. July and August came in lower at 27% and -4% respectively.

August of 2020 was 2<sup>nd</sup> lowest August inflow since Powell filled in 1964, with lowest occurring in 2002.

The WY2020 unregulated inflow into Lake Powell is projected to be 55% of the historical average and potentially within the 10 lowest Powell inflows.

Note that 6 of the lowest 10 years of Powell inflows have occurred since 2002.

