Watershed Planning Discussions at the Binational Border Water Resources Summit, El Paso-Ciudad Juárez, September 2012

IBWC San Diego Citizens Forum, November 8, 2012

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Binational Border Water Resources Summit: Past, Present, and Future

- Ciudad Juárez and El Paso, September 27-28, 2012
- Convened by IBWC with cosponsors
  - Southwest Consortium for Environmental Research and Policy
  - Universidad Autónoma de Ciudad Juárez
  - North American Development Bank
  - University of Texas, El Paso
  - El Paso Water Utilities Public Service Board
  - Junta Municipal de Aguas y Saneamiento de Juárez

Commissioner Salmón, Directora JMAS, Commissioner Drucina at press conference

Summit

- Participants
  - Academic researchers
  - Practitioners from water agencies, federal, state, and local
  - Policy community
  - Binational agencies: IBWC and North American Development Bank
  - Approximately equal numbers of U.S. and Mexican participants
- Field trips
  - Wastewater treatment facility in Anapra
  - El Paso desalination facility

Monument 1 from Mexican side with ASARCO in El Paso across river

Anapra, colonia and Wastewater Treatment Plant

Kay Baily Hutchinson
Desal Plant, El Paso

Program

- Plenary Sessions each day
- 4 concurrent tracks each day
  - Water Supply
  - Innovation and Water Technology
  - Water Quality and the Environment
  - Watershed Planning
- Recommendations presented at the end of the conference

Day 2 Inauguration, UTEP

L to R: Consul Jacob Prado, President Natalicio UTEP, Commissioner Drucina, Mayor John Cook, Commissioner Salmon, Reclamation Commissioner Michael Conner, Congressman Silvestre Reyes

Watershed Track

- Background
  - Minute under discussion for transboundary watersheds
  - Many years of watershed research along the border
    - SD-TIJ
    - San Pedro
    - Rio Grande
- Goal of the track: Establish criteria that permit comprehensive watershed planning to the benefit of users on both sides of the border based on the best practices available in this sector, while taking into consideration the legal limitations, as well as greater public participation.

Watershed Presentations

- *Integrated Management of Water in Transborder Basins,* Oscar Gutiérrez Sánchez, CONAGUA
  - International Network of Basin Organizations—INBRO (www.inbro.org)
  - Mexico's experience in watershed planning and management
  - Political, social, economic, legal, and environmental elements critical to planning

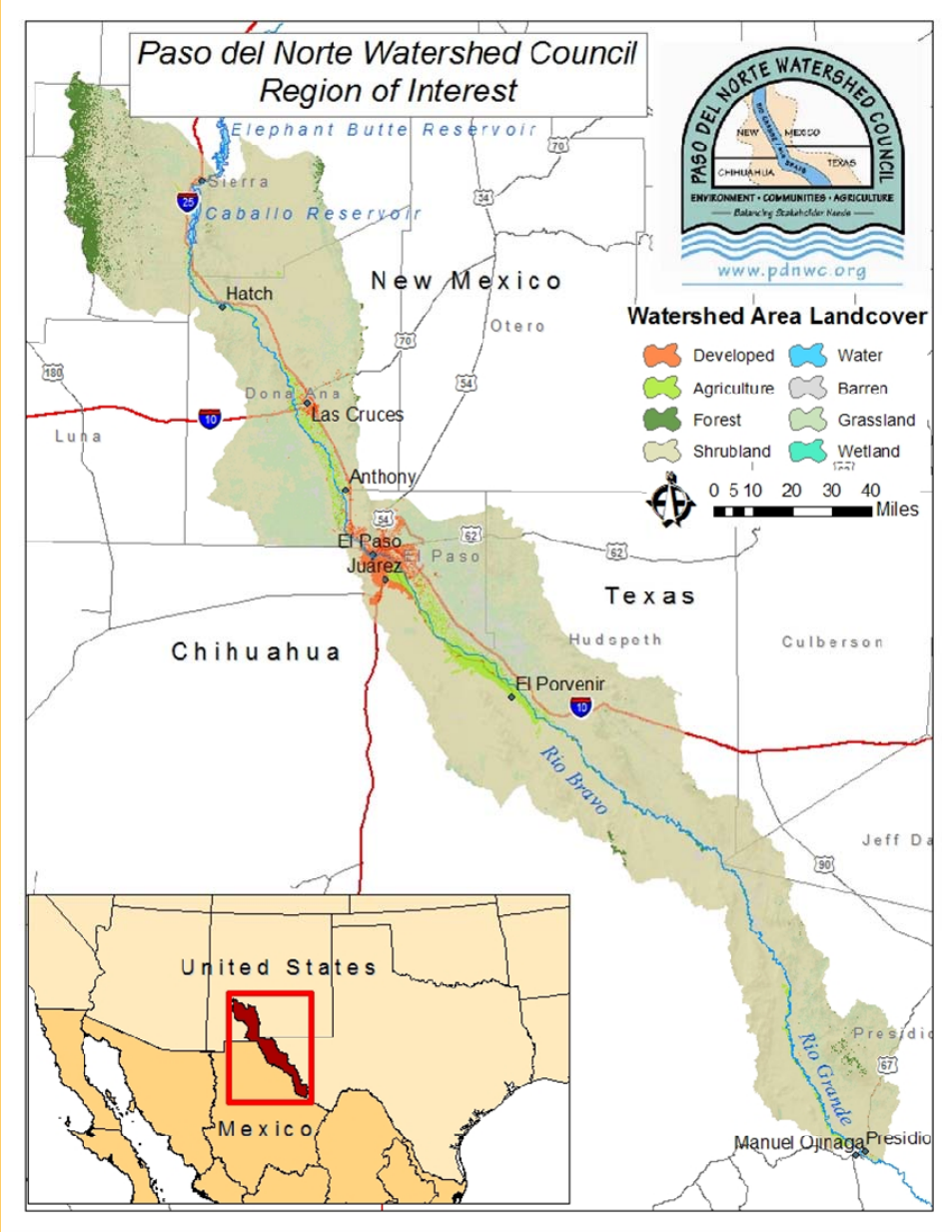
Overview of the Colorado River Basin Water Supply and Demand Study, Carly Jerla, Bureau of Reclamation

- Assess future water supply and demand imbalances over the next 50 years
- Develop and evaluate opportunities for resolving imbalances
- Study being conducted by Reclamation and the Basin States, in collaboration with stakeholders throughout the Basin
- Began in January 2010 and to be completed in November 2012
- A planning study; but will provide the technical foundation for future activities
- Relevant for Tijuana River Watershed

Potable Water in Ciudad Juárez, Growth and Sustainability, Carlos Alonso Guzmán, Junta Central de Agua y Saneamiento

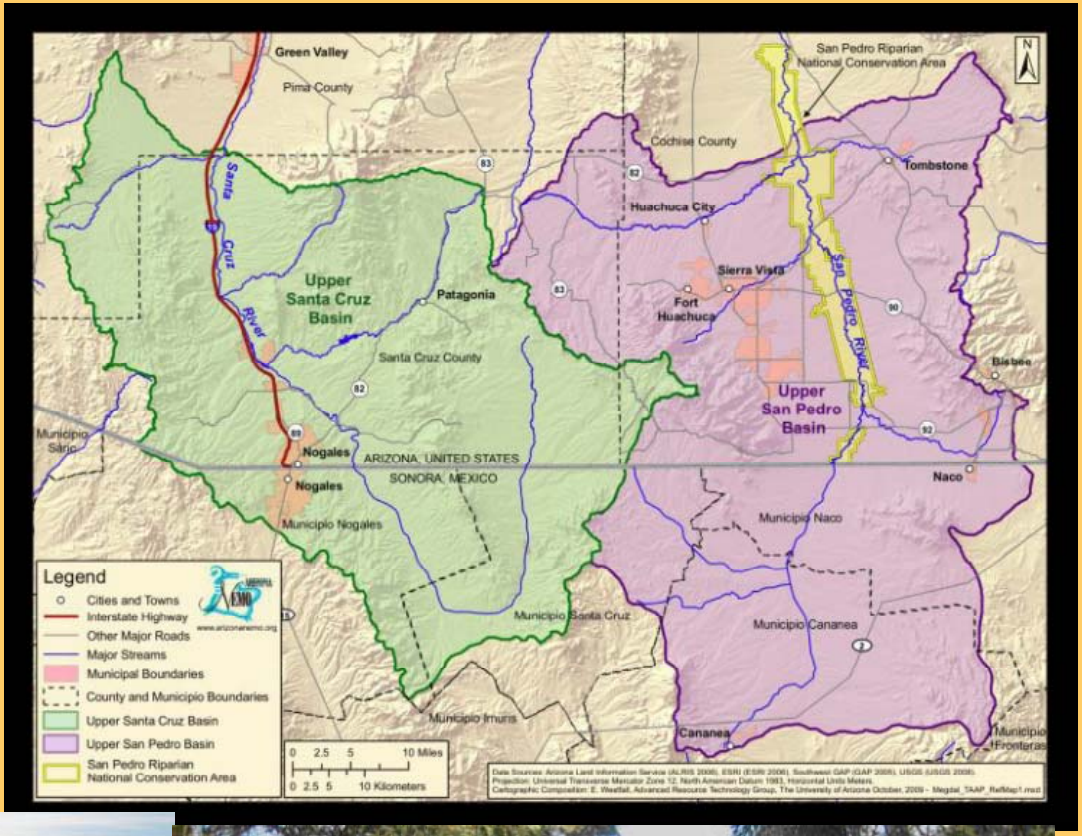
Watershed Management – Activities and Ideas from the Paso del Norte, Chris Brown, New Mexico State University

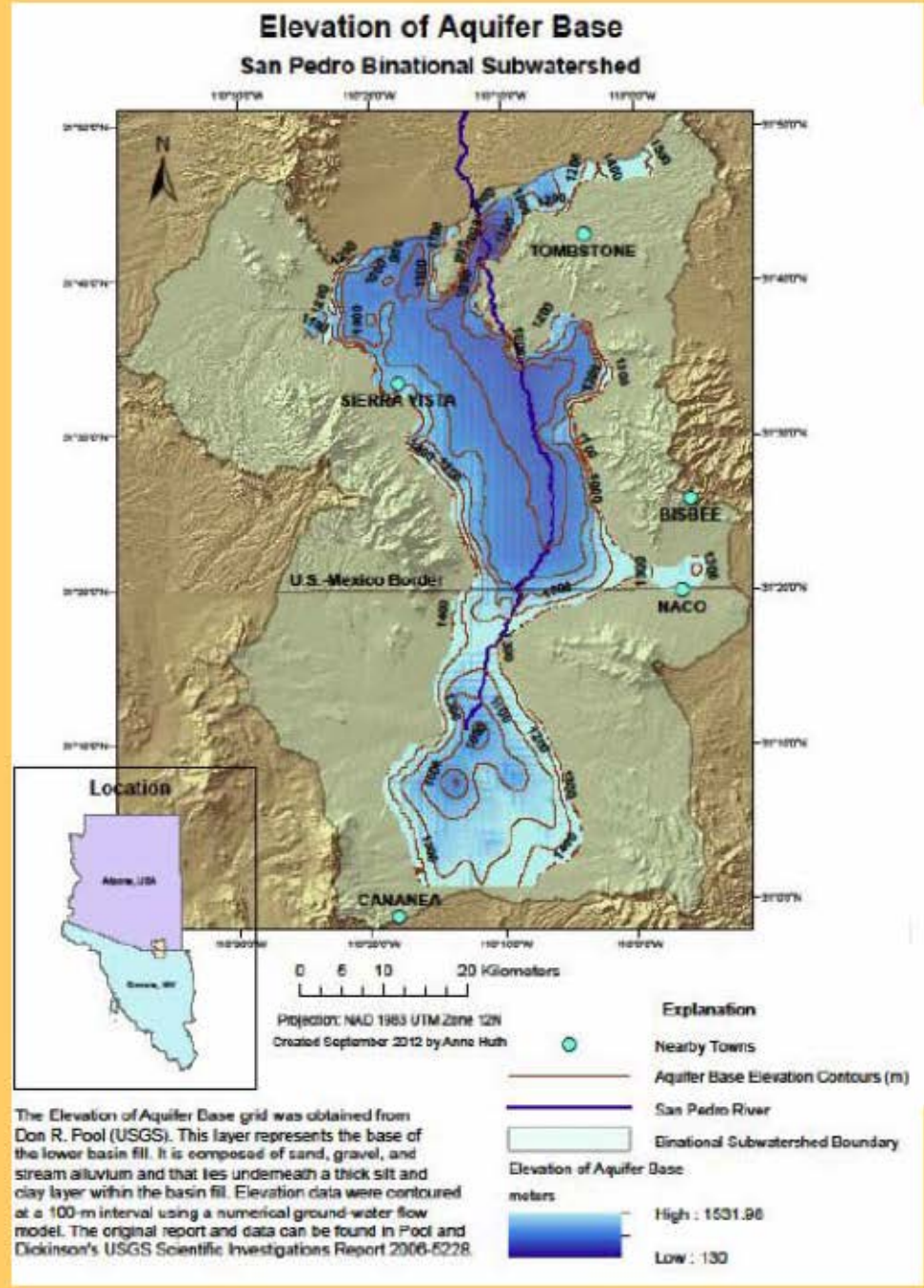
- 1991 New Mexico-Texas Water Commission to develop 50-year water plan for Paso del Norte area
- 2000 convened Paso del Norte Watershed Council to select restoration projects
- Broad stakeholder participation

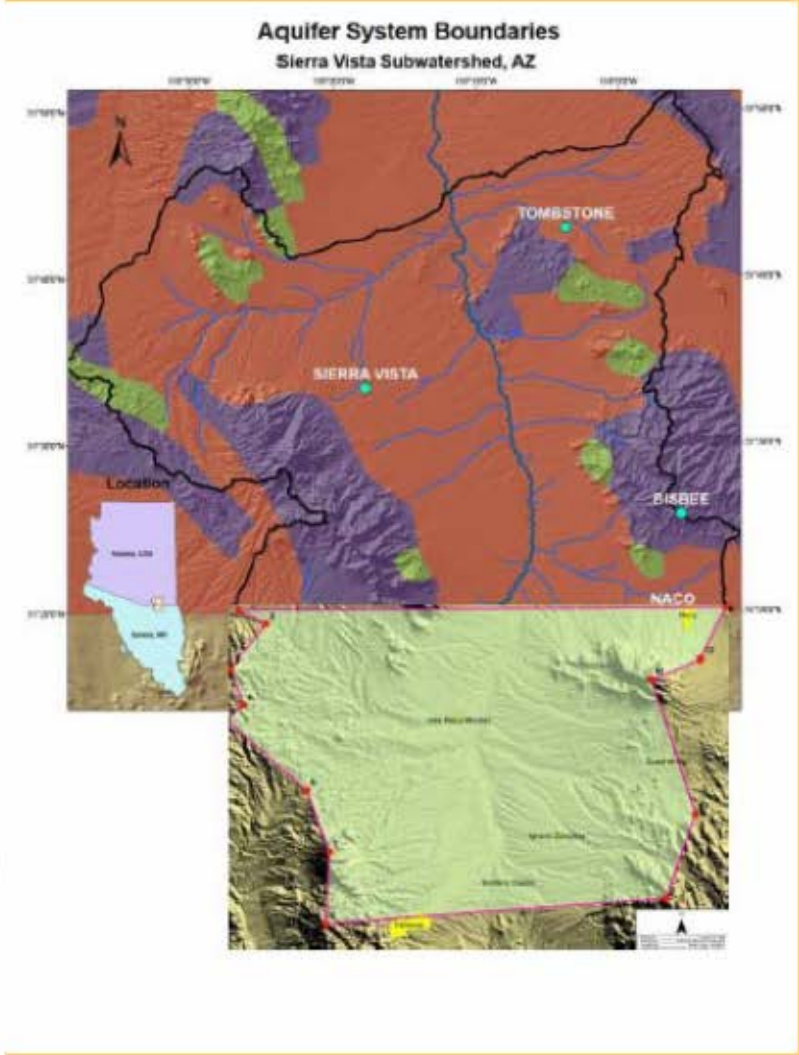


The Binational Assessment of the Santa Cruz and San Pedro Aquifers, Plácido dos Santos, U AZ

- The U.S.-Mexico Transboundary Aquifer Assessment Program (TAAP)
- U.S.-Mexican agreement, funding
- U Sonora, U AZ, USGS, and others
- California not included




Elevation of Aquifer Base
San Pedro Binational Subwatershed
TOMBSTONE
SIERRA VISTA
BISBEE
U.S.-Mexico Border
NACO
CANANEA
Location
0 5 10 20 Kilometers
Projection: NAD 1983 UTM Zone 12N
Created September 2012 by Anna Huth
Explanation
Nearby Towns
Aquifer Base Elevation Contours (m)
San Pedro River
Binational Subwatershed Boundary
Elevation of Aquifer Base
meters
High : 1531.98
Low : 130
The Elevation of Aquifer Base grid was obtained from Don R. Pool (USGS). This layer represents the base of the lower basin fill. It is composed of sand, gravel, and stream alluvium and that lies underneath a thick silt and clay layer within the basin fill. Elevation data were contoured at a 100-m interval using a numerical ground-water flow model. The original report and data can be found in Pool and Dickinson's USGS Scientific Investigations Report 2006-5228.


Aquifer System Boundaries
Sierra Vista Subwatershed, AZ
TOMBSTONE
SIERRA VISTA
BISBEE
NACO
Location

Watershed Presentations

- Mario López Pérez, CONAGUA
  - Half of world's basins are binational
    - Some include as many as 9 countries
    - Many have navigable rivers
  - Mexico has clear framework for watershed management and planning
  - Analisis of 1944 water treaty
    - Minutes provide ability to update the treaty
    - The existing legal framework ***does not yet permit binational watershed councils***

Summit Recommendations

Watershed Recommendations

- Watershed planning for the use of water resources, decision making, and the conservation of shared water resources require participation of the governments and society as well as the academic and scientific community.

Watershed Recommendations

- Establish sustainable structures such as binational watershed forums
  - the public sector
  - private sector
  - citizens groups
  - scientific advisory group

Watershed Recommendations

- Establish and maintain a clearing house for binational watershed scientific, technical, socio-economic, historical, and other data

Watershed Recommendations

- Support and facilitate watershed research in the following areas:
  - Conservation of species and ecosystems
  - Better groundwater modeling (Mesilla Bolson) and funding continuance for the critical Transbourndary Aquifer Assessment Program (TAAP), a cooperative Mexican-U.S. research project.
  - Climate change research and analysis are key components of watershed analysis and planning
  - Best case practices of adaptive management and mitigation strategies
  - Long term planning and forecasts based on scientific data
  - Data harmonization, data sharing, and coordination of research methodologies should be coordinated across the international boundary.

Watershed Recommendations

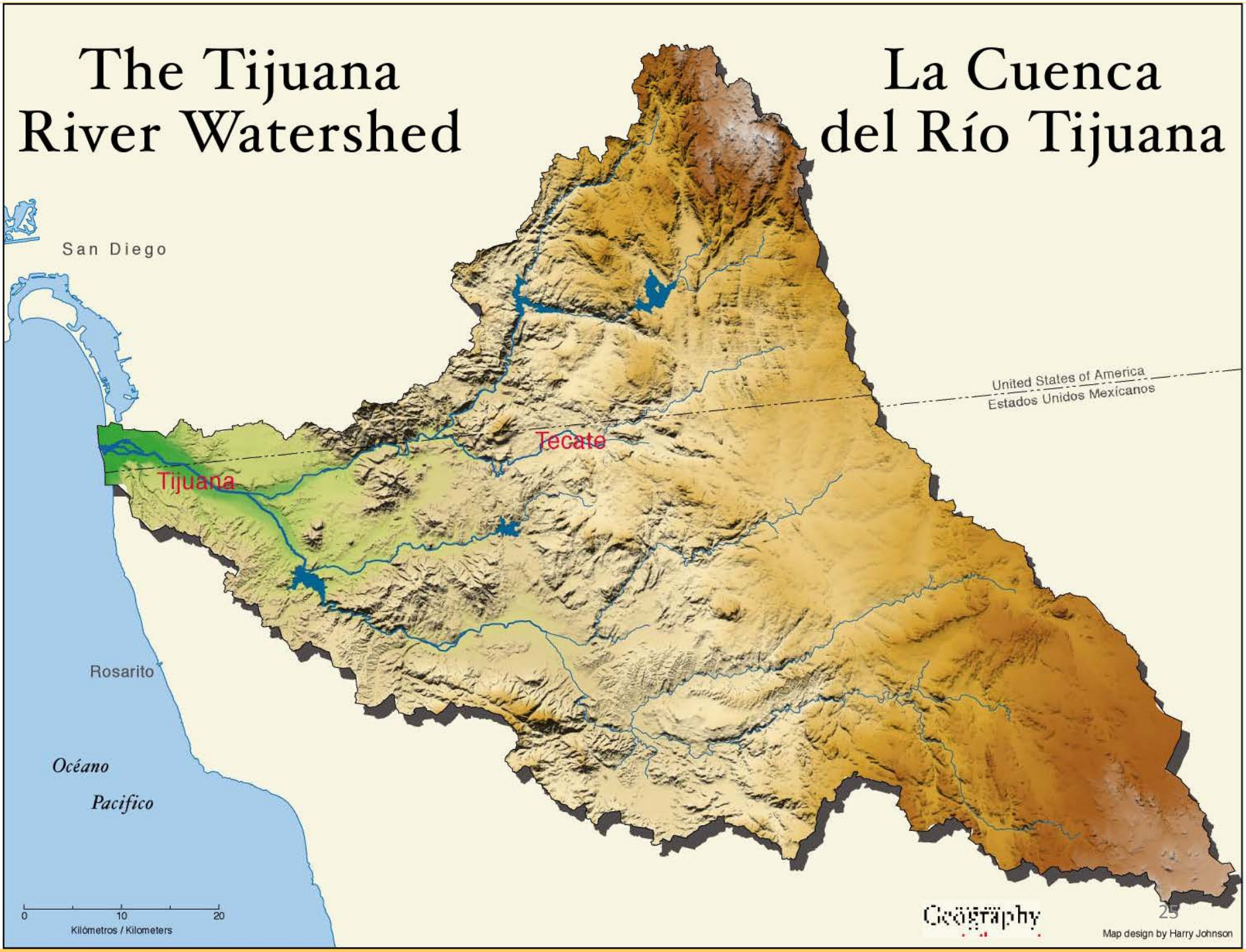
- Develop new approaches to integrated watershed analysis and management across the border
  - Water availability, water use, and water balance
  - Water quality
  - Ecosystem health and conservation of species and habitats
  - Short, medium, and long term planning
  - Land cover changes and management
  - Population characteristics and change
  - Legal, political, and social aspects of watershed planning and management.

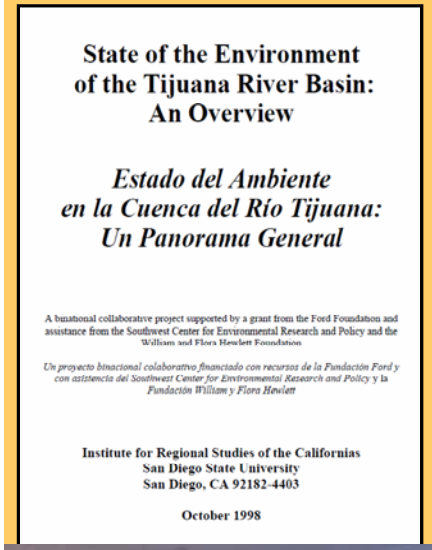
Watershed Recommendations

- Continue investment in border water infrastructure
- Given water scarcity, demand management (conservation) of water use should be incorporated into planning and management of shared water resources

Discussion

- High quality and professional presentations by all participants
- High level of expertise of Mexican officials and researchers regarding border water issues
- Relevance to Tijuana River Watershed; frequent mention of TRW as possible pilot effort under the new minute
- Frequent mention of binational watershed forums
- Inclusion of all stakeholders


The Tijuana River Watershed
La Cuenca del Río Tijuana
San Diego
United States of America
Estados Unidos Mexicanos
Tecate
Tijuana
Rosarito
Océano
Pacifico
0
10
20
Kilómetros / Kilometers
Map design by Harry Johnson



State of the Environment
of the Tijuana River Basin:
An Overview

Estado del Ambiente
en la Cuenca del Río Tijuana:
Un Panorama General

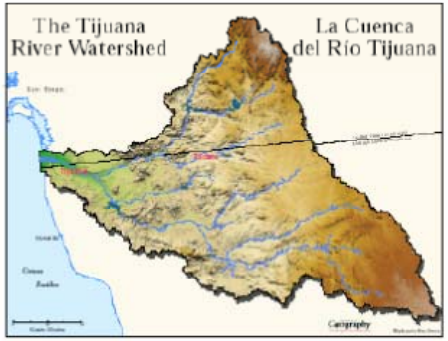
A binational collaborative project supported by a grant from the Ford Foundation and assistance from the Southwest Center for Environmental Research and Policy and the William and Flora Hewlett Foundation

Un proyecto binacional colaborativo financiado con recursos de la Fundación Ford y con asistencia del Southwest Center for Environmental Research and Policy y la Fundación William y Flora Hewlett

Institute for Regional Studies of the Californias
San Diego State University
San Diego, CA 92182-4403

October 1998

San Diego-Tijuana International Border Area Planning Atlas/ Atlas de Planeación del Área Fronteriza Internacional Tijuana-San Diego, 2000



A Binational Vision for the
Tijuana River Watershed

Prepared for the
Binational Watershed Advisory Council for the Tijuana River Watershed
by
the Institute for Regional Studies of the Californias and
the Department of Geography at
San Diego State University

August 2005

With partial funding from the California State Water Resources Control Board,
the County of San Diego, and San Diego State University

The Tijuana River Watershed Atlas
(bilingual, 2005)

Next Steps for TRW

- SDSU will update the 2005 Vision document
- Binational watershed forums?
- Watershed management in Mexico and USA?