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International Boundary and Water Commission Current Programs Presentation Outline

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INTRODUCTION

Challenges of International Cooperation (framework for response to upstream and downstream concerns)

- Competing interests, jurisdictions, authorities, and histories, agricultural vs. urban, jurisdictions cover two US states and two countries
- Water for the environment - there is great interest in water for the environment which poses a challenge for the Sustainable Water Project, Canalization Project, and Rio Grande/Rio Bravo Binational Symposium follow-up
- Arid area vs. flood control concerns - Canalization Project must provide flood protection although many in the community may not be aware of historical floods
- Complete information on transboundary aquifers - Work is well underway with regard to the Hueco Bolson but a challenge for the future is to get more information on transboundary aquifers

(Mesilla Bolson) and to consider binational cooperation in managing these aquifers

- Understanding a technically (and politically) complex situation - Many factors influence the basin and how these factors all interact is very complex and subject to interpretation. Examples are discussions of potential impacts of Sustainable Water Project, those of Canalization Project, and adequate mitigation
- Parity and comity with Mexico - Existing treaties dictate certain aspects of how the Rio Grande/ Rio Bravo are managed. There is a challenge in addressing issues with Mexico related to groundwater and the impact of US-side activities on Mexico
- Identifying and providing full participation to all stakeholders - It is important to involve stakeholders with a variety of interests related to the river. Water agencies need to move toward greater transparency and stakeholder involvement (Citizens Forum)
- Role of the IBWC — historical role vs. demands for leadership beyond traditional jurisdictional limits

IBWC BACKGROUND

- Established in 1889 with a U.S. Section and a Mexican Section
- Applies water and boundary treaties between the U.S. and Mexico
- Resolves differences that may arise in application of the treaties

HISTORY OF IBWC

Convention of 1906

- Provided for the distribution between the U.S. and Mexico of the waters of the Rio Grande in the greater El Paso-Juarez area
- Mexico to receive 60,000 acre feet/year (approx. 10% of the river's apportioned flow) at the Acequia Madre or Old Mexico Canal
- In drought, the amount delivered to Mexico is reduced in same proportion as the water delivered to U.S. irrigators

1944 Water Treaty

HUECO BOLSON

- U.S. and Mexico both use the Hueco Bolson aquifer for drinking water
- Main source of water for Municipal and Industrial use in Juarez
- In 1999, 191,000 acre-feet pumped from the Hueco, 63% by Mexico
- Municipal pumping increased 13% in Mexico between 1990 and 1994 while U.S. municipal and military pumping decreased 24%
- Withdrawals currently exceed recharge. If this situation continues, the Hueco Bolson could be totally used up by 2030.
- Information exchange between El Paso and Juarez water utilities began in 1995 for such topics as:
 - 1) Well construction data and use of wells
 - 2) Pumping records
 - 3) Groundwater quality analysis
- Binational Report
 - 1) Binational Technical Group established to include local, state, and federal representatives (USIBWC, Texas Water Development Board, New Mexico Water Resources Research Institute, USGS, EPA, MxIBWC, CNA, Junta
 - 2) Through this group, a report was published in early 1998: "Transboundary Aquifers and Binational Ground-Water Data Base, City of El Paso/Ciudad Juarez Area"
 - Report includes a data base on groundwaters in the area
 - Summarizes and integrates material received through the information exchange

Note: minimal attention to Mesilla Bolson, although Juarez is looking at feasibility of utilizing the Mesilla Bolson

- Modeling Effort
 - 1) Binational Technical Group established including USIBWC, USGS, El Paso Water Utilities, MxIBWC, Junta.
 - 2) Group has been working to develop mathematical groundwater models for the aquifer on both sides of the border. Each country has been working on a model. IBWC will prepare a Joint Report summarizing and accepting the technical reports developed by each country.

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Current Programs

- 3) The groundwater models will assist authorities in both countries with planning for optimum utilization and administration of groundwater resources of the region.
 - 4) Work is in its final stages, and we expect a Joint Report in the coming months.
- Challenges
 - 1) Moving from data exchange to agreement for managing shared groundwaters, yet obtaining complete information on the aquifer
 - 2) Technical challenge: merging two parallel models of Hueco Bolson
 - 3) Due consideration to Juarez's planning efforts in view of dwindling groundwater supply and minimal resources (to study)

RIO GRANDE CANALIZATION PROJECT

- Constructed 1938-1943
- For 106 miles from Percha Dam, NM to El Paso, TX
- River channel with mowed floodway and levees in most areas
- Purposes:
 - 1) Flood control
 - 2) To facilitate deliveries of Rio Grande water to Mexico per 1906 treaty

RIO GRANDE CANALIZATION PROJECT ENVIRONMENTAL IMPACT STATEMENT (EIS)

Purpose and need:

- To preserve the integrity of flood control
- To continue water deliveries
- To identify and consider environmental enhancement opportunities and non-structural operational practices that support restoration of native riparian and aquatic habitats

Draft Alternatives for further analysis

- No action - maintain current practices (dredging, mowing, some no-mow zones and fish habitat structures)
- Selective Operations and Maintenance modification - raising levees or construction of flood walls, expansion of fish habitat structures at existing locations, expansion of no-mow areas
- Integrated IBWC Land Management - same as above plus additional enhancements within USIBWC right-of-way such as fish habitat structures at additional locations, enhance

wetlands, additional tree planting, modification of grazing leases, channel splits and embankment treatments

- Targeted Stream Restoration - same as above plus acquisition of flood easements and levee setbacks, planting sites and meanders outside of USIBWC right-of-way
- Multipurpose Watershed Management - same as above plus sediment control in sub-basins, runoff control, backwater habitat at dams, improvement of water quality, additional recreation areas, adoption of minimum instream flows, seasonal peak flows. Requires cooperative agreements with other agencies and the private sector

Challenges

- The flood control project is in an arid area. People may not be familiar with the historical floods in the area and the need to provide flood control to protect life and property
- Water for the environment vs. need to eliminate obstructions to passage of flood flows
- Competing interest - environmental enhancements challenge traditional methods of providing flood control; watershed approach vs. jurisdictional approach

Draft EIS December 2001 followed by public comment period, Record of Decision April 2002

RIO GRANDE CANALIZATION PROJECT - Siphon Rehabilitation

Need:

- Rincon and Hatch siphons are 80 years old
- Siphons are big pipes that transport irrigation water from one side of the river to the other; a failure would negatively impact the agricultural economy of southern New Mexico
- River channel has dropped over the years; siphons are not safely below the river channel bottom

Rehabilitation work:

- Recommended alternative (as of 9/26): driving a sheet pile wall at the crest of the drop below each siphon and the placement of boulders downstream of the sheet piling
- Design to be completed in the first half of 2001
- Construction expected during the next non-irrigation season after completion of design

RIO GRANDE CANALIZATION PROJECT - Picacho Flume Rehabilitation

- The flume transports irrigation water over the river
- Drop in river channel has exposed the top of the wooden pilings which support the concrete piers for the flume
- Study for the rehabilitation has just begun
- Construction would be done during the non-irrigation season

NEW MEXICO/TEXAS WATER COMMISSION PROJECT - EL PASO LAS CRUCES REGIONAL SUSTAINABLE WATER PROJECT

- Provide year-round drinking water supply from the Rio Grande for communities in southern New Mexico and the greater El Paso area
- Protect and maintain the sustainability of the Mesilla Bolson and extend the longevity of the Hueco Bolson
- Increase supplies through more efficient delivery, water conservation, and treatment
- Provide benefits to the riverine ecosystem
- Meet treaty, compact, and contract requirements for deliveries to Mexico, farmers, etc.
- Meet the region's drinking water needs through 2030, providing an additional 174.5 mgd of surface water to communities
- Convert agricultural water to Municipal and Industrial uses
- Construction of water conveyance structures and treatment plants - Preferred Alternative
 - 1) Construction of three water treatment plants in New Mexico: Hatch, Las Cruces, and Anthony
 - 2) Construction of Upper Valley Water Treatment Plant and expansion of Jonathan Rogers Water Treatment Plant in El Paso
 - 3) Construction of a 32-mile aqueduct to convey water from Upper Valley Treatment Plant to northeast and northwest El Paso
 - 4) After transport via aqueduct, treated water would be stored in the Hueco Bolson aquifer during periods of excess supply
 - 5) Construction costs through 2010 - approximately \$300 million

- Fish and Wildlife Enhancements and Mitigation - under preferred Alternative
 - 1) 2% of project construction costs set aside to fund these enhancements; additional funding will be sought
 - 2) Possible enhancements/mitigation include:
 - a) Widen active channel with embayments, backwater areas, and sloughs to create quiet-water areas for fish
 - b) Planting of native riparian vegetation such as willow and cottonwood
 - c) Control of exotics and noxious weeds
 - d) Establish no-mow zones
 - e) Develop wetlands at treatment plant sites
 - f) Construction practices that would control erosion, protect sensitive areas, restore disturbed areas, etc.
- USIBWC is federal lead environmental agency
- EIS finished Nov. 27, 2000; ROD by Dec. 27, 2000; signed Jan. 16, 2001
- Challenges
 - 1) Competing interests, jurisdictions, authorities and histories (municipal vs agricultural, NM vs. TX, etc.)
 - 2) Identifying and providing full participation to all stakeholders
 - 3) Understanding a technically complex situation - There are different perceptions among observers of the long-term effect of the project on the river ecosystem, farmland that would be taken out of production
 - 4) Providing water for the environment, a relatively new concept, in a region where some feel there is not currently enough water for humans
 - 5) Parity and comity with Mexico; there are varying viewpoints about the extent to which impacts in Mexico should be considered during implementation of projects in the U.S.

RIO GRANDE CITIZENS' FORUM - El Paso-Las Cruces Area

- Represents cross-section of interests in the community; Co-Chairs are Carlos Marin of IBWC and Kevin Bixby of Southwest Environmental Center

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- Facilitating dialogue about IBWC projects from Percha Dam, NM to Ft. Quitman, TX
- Quarterly meetings held alternately in Las Cruces and El Paso
- Topics covered have included:
 - 1) Proposed river parks
 - 2) El Paso-Las Cruces Regional Sustainable Water Project
 - 3) Salt cedar eradication
 - 4) Canalization Project EIS
- Next meeting: evening of August 2001 at NMSU in Las Cruces (tentative)

RIO GRANDE/RIO BRAVO BINATIONAL SYMPOSIUM, FT. QUITMAN TO AMISTAD

- Held in Juarez in June; led by Secretary Bruce Babbitt and SEMARNAP Secretary Julia Carabias
- Joint Declaration
 - 1) Binational task force under IBWC to implement Symposium recommendations (task force to be formed after new government takes office in Mexico. Workgroup will be formed to advance items in the Joint Declaration in the interim)
 - 2) Examine opportunities for minimum flows
 - 3) Strengthen binational cooperation and coordination to conserve natural resources in this part of the Rio Grande
 - 4) Research on biologic and hydrologic conditions and transboundary species (baseline reports on biologic and hydrologic conditions from Ft. Quitman to Presidio expected to be completed by early 2001)
 - 5) Develop and exchange compatible information systems/data bases (digital orthophoto quadrangles expected to be provided to workgroup members in the coming weeks.)
 - 6) Facilitate public participation in developing strategies for environmental sustainability (workgroup to recommend public participation strategies by early 2001.)
 - 7) Cooperative efforts to develop natural resource initiatives