

12-12-2014

## Conference Report 1. Water Forum for business and urban leaders: discussing the water futures in El Paso del Norte Region

William Hargrove

*Center for Environmental Resource Management (CERM)*, wlhargrove@utep.edu

Josiah Heyman

*Center for Inter-American Border Studies (CIBS)*, jmheyman@utep.edu

Ana Rodriguez Camargo

*Hunt Institute for Global Competitiveness*, arodriguez132@utep.edu

Patrick Schaefer

*Hunt Institute for Global Competitiveness*, pcschaefer@utep.edu

Follow this and additional works at: [https://scholarworks.utep.edu/hunt\\_confrep](https://scholarworks.utep.edu/hunt_confrep)



Part of the [Infrastructure Commons](#), and the [Urban Studies Commons](#)

---

### Recommended Citation

Hargrove, William; Heyman, Josiah; Rodriguez Camargo, Ana; and Schaefer, Patrick, "Conference Report 1. Water Forum for business and urban leaders: discussing the water futures in El Paso del Norte Region" (2014). *Conference Reports*. 1.

[https://scholarworks.utep.edu/hunt\\_confrep/1](https://scholarworks.utep.edu/hunt_confrep/1)

This Article is brought to you for free and open access by the Hunt Institute for Global Competitiveness at ScholarWorks@UTEP. It has been accepted for inclusion in Conference Reports by an authorized administrator of ScholarWorks@UTEP. For more information, please contact [lweber@utep.edu](mailto:lweber@utep.edu).



# HUNT INSTITUTE

FOR GLOBAL COMPETITIVENESS

## Conference Report 1. Water Forum for business and urban leaders: discussing the water futures in El Paso del Norte Region\*

*Ciudad Juarez - El Paso - Las Cruces*

December 12, 2014, UTEP

\*This paper was edited on January 2015 by:

William Hargrove, *Center for Environmental Resource Management (CERM)*

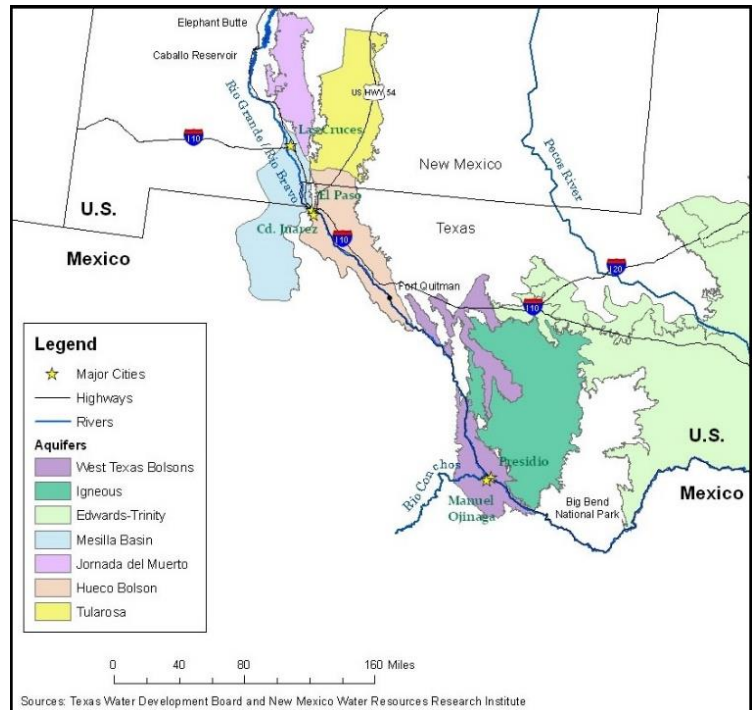
Josiah Heyman, *Center for Inter-American and Border Studies (CIBS)*

Ana Rodriguez Camargo & Patrick Schaefer, *Hunt Institute for Global Competitiveness*

### Introduction

Water is critical to economic growth. Businesses in water-scarce areas are potentially at risk and investors are increasingly taking water supply into consideration during their decision-making processes. In the Paso del Norte region, water is one of the scarcest resources and, as a result, it is particularly important to examine the latest trends not only in water supply and demand, but also in infrastructure and conservation. The Water Forum for Business and Urban Stakeholders brought business, utilities, and community leaders together to learn from each other's water management strategies as well as to discuss the best methods to insure robust and equitable economic growth in our region without jeopardizing our common water resources.

Given the context of dwindling water supplies under long-term drought and the growing demands of a vibrant economy in our region, we convened a group of utility and business leaders to discuss our "water future" and how it might impact economic development and growth in the region. The Forum began with the presentations by El Paso Water Utilities and the Junta Municipal de Agua y Saneamiento of Ciudad Juárez. Subsequently, the participants engaged in a discussion about the topics raised in the presentations as well as other concerns that arose from the conversation. The proceedings of the event are captured and summarized in this report.



## El Paso Water Utilities (EPWU)

*Scott Reinert - Water Resources Manager*

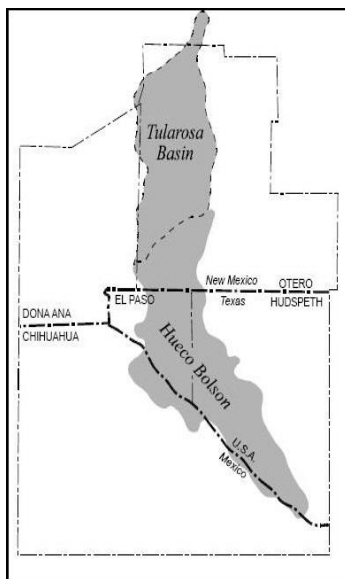
El Paso depends primarily on three water supplies: 1) surface water from the Rio Grande, 2) groundwater, primarily from the Hueco Bolson, and 3) desalination of brackish groundwater, primarily at the Kay Bailey Hutchinson plant, the largest inland desalination plant in the world, and on a smaller scale, on-site wellhead treatment. EPWU is taking a number of steps in order to extend the life of these supplies: 1) promoting conservation (least expensive) by using block pricing, providing incentives to reduce landscaping use, increase water efficient appliances and plumbing, reduce reliance on water coolers for household air conditioning, and others; 2) water reuse by treating wastewater and reusing either as potable water or for landscape irrigation; and 3) developing distant sources (most expensive). Ideally, EPWU would like to depend on the Rio Grande (*Rio Bravo del Norte* in Mexico) for half of its needs, but the recent drought makes this unrealistic. In 2013, the region experienced the most severe drought in recent times, EPWU could access only one sixth of its normal allocation.

Deficiencies in supply from the Rio Grande have to be made up with groundwater. EPWU is rehabilitating old wells and drilling new wells to meet the demands. The Upper Valley presents special challenges in the need to remove naturally occurring arsenic from groundwater in that area. Most new wells are being developed on the eastside of El Paso, near the airport, and in the far northeast corner of El Paso County. Further east the groundwater becomes too salty.

## The Ciudad Juárez Municipal Water System (Junta Municipal de Agua y Saneamiento, JMAS)

*Manuel Herrera - Technical Director*

All of the surface water from the *Rio Bravo del Norte* that is allocated to Mexico is used for irrigated agriculture. Ciudad



<http://www.twdb.state.tx.us/publications> 1

Juárez is dependent on groundwater, mostly from the Hueco Bolson but also from the Mesilla Bolson, for its potable water.

Currently there are about 445,000 connections in the city served by three treatment plants. The number of connections and the amount of groundwater pumped on an annual basis has grown in recent years as the city and the number of maquiladoras have grown.

There are three well-fields drawing water from the Hueco Bolson to the south and east of the city and from the Mesilla Bolson on the west side. New wells are being developed on the west side in the Mesilla Bolson.

Secondary treatment of wastewater and reuse of this water for landscaping and other non-potable uses began in 2011. 95% of treated wastewater goes to the Valle de Juárez to the southeast of the city for irrigated agriculture, mostly pecans, alfalfa, and other forages. The remainder of treated wastewater is used for such landscape irrigation in the city (e.g. the Chamizal Park.)

Some private businesses are investing in the Mesilla well-field and selling water to the utility under contract for 120 months at a cost of 5 pesos/cubic meter.

**Question for Discussion:** What are the main challenges for the future in water quantity and water quality and how will it impact our business/work in the Paso del Norte region?

- The two big challenges that we face are salinity and drought, therefore water planning is critical. Now that we are in a long-term drought, impacts of water shortage are acute and awareness is high. We should use this opportunity to improve planning.
- We need to improve the quality of the public discourse concerning water issues. How can we expand the dialogue to help citizens understand water issues? The Ciudad Juárez initiative of developing a “culture of water” is a good model.
- We need to consider the water-energy nexus. El Paso Electric is trying to improve on their water use efficiency. They are moving more to dry cooling and use of gray water.
- UTEP’s water conservation team plans to create a waste-water recycling strategy on campus.
- In southern New Mexico, 80% of water is used for agriculture. Where can we get new water supplies for business expansion? Growth in population in the region is leading to increased use of both water and energy.
- Water infrastructure improvement projects are expensive and require large capital outlays. The Hunt Institute estimates that at least \$400 million is needed for local infrastructure improvements. At this time EPWU and Las Cruces Utilities pass the costs of improvements to rate payers, but the extent to which this can be done is limited. State funds are often loans and not grants. In New Mexico, the Water Trust Board can provide financial assistance to rural communities.
- The water utility for Santa Teresa and Sunland Park is a public/private partnership with limited resources for infrastructure improvement because of its relatively small size compared to the three major cities in the region (Juárez, El Paso, and Las Cruces).
- There are big differences among the cities in the region in terms of their principal water supplies. Santa Teresa/Sunland Park, Las Cruces, and Juárez depend solely on groundwater, although Juárez is planning to use some water from the Rio Grande in the near future; El Paso depends on three main sources today with additional sources identified for the future.
- Conservation is an important strategy for extending supplies. The current per capita consumption in El Paso is about 130 gal/day. EPWU plans to lower the per capita use in El Paso by 3 gal/d/decade until 2060. If they don’t achieve that, they will have to increase supply in other ways. Achieving the 2060 water conservation goal is equivalent to adding 30,000 acre foot supply per year. In Las Cruces, the per capita use is currently about 180 gal/day. Clearly, there are gains to be had through conservation.
- Another strategy for increasing supply is storm-water capture, though there are some barriers in NM because storm-water contributions are considered to be part of the surface water that is already allocated to downstream users and it is not available for other uses.



- JMAS has a master plan for the next 20 years and plans several initiatives/strategies for augmenting water supplies. One is to develop a water treatment plant south of the city to treat and use some surface water from the Rio Grande. Also improving water infrastructure to be more efficient is a major part of their strategy. Promoting their “culture of water” and household level conservation is also an important aspect of their strategy. They are planning to build a thematic park about water aimed at secondary school students that will promote the “culture of water” through education.

- Like the U.S., in Mexico about 80% of water use is for agriculture. There is room for improvement in irrigation technologies. Groundwater is not used as much for irrigation in Mexico compared to the U.S. due to the cost of pumping. Groundwater is considered a federal resource in Mexico. The government charges 0.46 pesos/liter for extracting groundwater. It is also expensive to develop artificial recharge projects because the water that is used for artificial recharge has to be almost at potable water quality.
- Juárez is also looking at developing groundwater supplies further away from the city, especially in the *Valle de Juárez*.

## Summary

- A recurring theme from the presentations and discussions was: **How can we expand sources of water and use existing water more efficiently to support continued economic growth and improved household access?**
- Some technologies that were identified and discussed include:

Stormwater capture	Treatment of waste water & reuse	Desalination of brackish water	Water Conservation
--------------------	----------------------------------	--------------------------------	--------------------

- Additionally, there was widespread consensus on the need for public education. Extending and improving the dialogue about our shared water future and what can be done to shape it, is something that we can and work towards, across the region.

**Appendix 1 & 2:** List of Participants and agenda of the day.

For more information please contact us: [huntinstitute@utep.edu](mailto:huntinstitute@utep.edu)

