Regional Water Planning and Implementation – An El Paso Success Story
Agenda

- City of El Paso/El Paso Water Utilities
- Regional Water Resources
- Drought
- Desalination
- Sustainable Water Supplies
- Region E Planning
- Water Conservation
- Regional Planning Efforts
- Summary
El Paso, Texas Profile

- Sixth largest city in Texas
- Located in the Chihuahuan Desert
- EPWU service area: 800,600 people
- Over 300 days of sunshine, 70° average daily temperature
- Low humidity and average rainfall of 9”-10” per year
El Paso Water Utilities
Public Service Board

- Created in 1952 by City ordinance
- Comprised of 7 members to include the Mayor
- The PSB sets policy, adopts fiscal budgets, rates and fees, and approves an annual strategic plan for 4 utilities
- EPWU provides water service to 97 percent of El Paso County (750,000+ residents)
- EPWU’s capital improvement needs over the next 10 years are projected to be over $800 million
EPWU Service Area
El Paso’s Diversified Resources


- Surface Water
- Groundwater
- Reclaimed Water
- Desalination
- Conservation
- Importation
Key Water Issues

- Amount of sustainable water (Where is it going to come from?)
- Cost (How to pay for development of water resources?)
- When to implement these “new” programs?
Managing Drought in El Paso
Managing Drought

- Increased Conservation & Desalination
- Surface Water Strategies
- Reclaimed Water
- Groundwater Strategies
- Emergency Management Rule
Only 3 of the past 16 years has runoff into Elephant Butte been above average.
2012 Drought Summary

- EPWU received reduced river water allocation **37,000 AF** compared to 60,000 AF
- River releases began late and ended early
- River gates at Caballo closed in the middle of season
  - Two river water treatment plants shut down
  - Three week critical conservation period in May
Elephant Butte Reservoir
Historic Levels

Acre-Feet

Bureau of Reclamation: Upper Colorado Region Historic Data
Rio Grande Runs Dry
May 12, 2012
Desalination Plant
Kay Bailey Hutchison Desalination Plant

- Opened in 2007 to deal with:
  - Drought
  - Emergency situations
  - Growth
  - Brackish water intrusion
Desalination Plant Details

- Up to 27.5 MGD capacity
- Raw water forced through membranes to separate salts and contaminants
- 5 skids
- Usually runs at 1-2 skids
- Operated at full capacity for the first time in May 2012
Kay Bailey Hutchison Desalination

- Award winning plant
- A model for other water utilities
- Research facility
- Toured by national and international visitors
Concentrate Disposal

- 3 Injection Wells
- Surface Injection Facilities
- Concentrate Pipeline (22 mi)
- Less costly and less environmental impact than evaporation
Sustainable Water Supplies
EPWU reduced Hueco pumping in 1989
- *Fundamentally changed conclusion reached in 1979* (depletion of fresh groundwater by 2030)
- Resulted in a “nearly sustainable” supply
  - Updated model developed by USGS
  - New data collected during drilling
Key Assumptions to “Nearly Sustainable Supply” for El Paso Portion of Hueco

- EPWU pumping:
  - 40,000 AF/yr in “normal” years
  - 75,000 AF/yr in drought years
- Juarez pumping:
  - 120,000 AF/yr
Previous Actions of Public Service Board

Extended availability of local supplies through

- Conservation Ordinance
- Investment in additional surface water rights and treatment capacity
- Investment in wells
- Investment in desalination facilities
- Investment in transmission facilities
- Investments in data collection and model development
Future Fresh Groundwater Storage Decline

- Average storage decline = 22,000 AF/yr
- Attribute all storage decline to fresh groundwater area
- After 100 years:
  - 75% of 2002 fresh groundwater storage remains
  - “Near sustainability”
Region E Planning
Region E  
Figure 4-2  
Water Management Strategies for EPWU  
January 2011

Figure 4-2. Water Management Strategies for EPWU
Importation of Water

- Wild Horse Ranch: Acreage 20,946
- Antelope Valley Ranch: Acreage 24,778
- Capitan Reef Farms: Acreage 27,554
Water Conservation
Conservation Efforts in El Paso

- EPWU reduced Hueco pumping in 1989. Made possible by:
  - Increased surface water use
  - Rate structure changes
  - Conservation
  - Public education and awareness
  - Increased reclaimed water use
Campaign Objectives:

- Decrease per capita water consumption
- Increase awareness of water conservation April – September
- Brand El Paso as a conservation leader
Media and Public Relations Efforts Continue

- Watering schedule reminders
- TV and radio live interviews
- Community events and workshops
- Home Depot partnership
- El Paso Times partnership

**WATER OUTLOOK**

<table>
<thead>
<tr>
<th>Daily maximum consumption goal*</th>
<th>Sunday’s consumption*</th>
<th>Elephant Butte percentage available</th>
</tr>
</thead>
<tbody>
<tr>
<td>145</td>
<td>127</td>
<td>7%</td>
</tr>
</tbody>
</table>

* Amounts in million gallons per day

SOURCE: EL PASO WATER UTILITIES, WWW.LESSISMOREEP.ORG
Regional Planning
Planning with JMAS
Areas of Interest Between the Two Water Utilities (EP/Juarez)

- Continued interaction with regional partners
- Tri-regional planning related to water within Rio Grande (TX/NM/Mexico)
- Groundwater modeling of the aquifers
- Exchange of information with regard to drilling, water consumption, water quality, water reuse, and reclaimed water
Additional Areas of Interest

- Development of information with regard to the joint management of the Bolsons along with water conservation, joint public affairs campaigns, media events, etc.

- Development of a proposal(s) to respective State and/or Federal governments for funding opportunities re: joint projects
Conclusions - Past and Present

- Improved data and analytical tools have provided EPWU better information about the Hueco (Similar studies are needed in Mesilla Bolson)

- Major Public Service Board water planning and policy implementation have improved conditions in Hueco:
  - Diversification of water resources and Pumping reductions; resulting in stabilized groundwater levels in many areas
Regional water planning and implementation has been a success and must continue.

Expected population growth will result in increased water demands.

Continued need for the following:

- Expanding infrastructure
- Development of non-traditional local supplies to include re-use
- Acquisition of data collection and analytical tools
- Continued conservation

Summary
GRACIAS / THANK YOU