Overview of the El Paso Kay Bailey Hutchison Desalination Plant

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WESTCAS Annual Conference
San Diego, California

June 22, 2017
• El Paso Water Supply

• Drought in El Paso

• Kay Bailey Hutchison Desalination Plant

• Enviro Water Minerals
Rio Grande Diversions

Acre/Feet

2016: TOTAL PRODUCTION
Acre-Feet

- Rio Grande 50,440 42%
- Hueco 47,026 40%
- Mesilla 21,929 18%
Drought in the Southwest

Water Volume (millions of acre-feet)

Elephant Butte Reservoir
June 2, 1994

Elephant Butte Reservoir
July 8, 2013

Images from the NASA Website
Kay Bailey Hutchison Desalination Plant

Opened in 2007 to deal with:
- Drought
- Emergency situations
- Growth
- Brackish water intrusion
Remote Concentrate Disposal Area

- Less costly and less environmental impact than evaporation ponds
- 3 injection wells
- Concentrate pipeline (22 mi)
Need for Expansion

- Drought conditions mean shorter irrigation season = less surface water available for less time
- KBH is critical when surface water (Rio Grande) is not available
  - No surface water in non-irrigation season (winter)
  - Extends freshwater supply by treating brackish.
- In summer, KBH provides peaking capacity to support surface water plants
- Proposed expansion of plant to increase capacity from 27.5 MGD to 42 MGD
Wellfield Addition

- “700 Series” wellfield at full buildout
- 27 new wells
- Estimated yield 500 gpm each
- Total Supply: 20 mgd
- Additional 6 miles of collector pipeline
Enviro Water Minerals Company (EWM), Public Private Partnership

- Partnership between EPWU and EWM
- Construction of a new plant adjacent to existing desalination plant.
- EWM uses EPWU concentrate to recover minerals.
- EPWU receives an additional 2 million gallons of potable water from EWM.
Enviro Water Minerals Company (EWM), Public Private Partnership

- Enviro Water Minerals Company is using cutting edge technology to recover minerals from waste brine from desalination plants.
Enviro Water Minerals Company (EWM)

- EWM chemically separates the concentrate into high-purity industrial grade minerals products that are highly valued in commercial markets.
- Potash Liquid Fertilizer
- Bromide Rich Brine (Power plant mercury scrubbing)
- Milk of Magnesia (Water treatment)
Proposed EWM Concentrated & Effluent Alignment

- **FUTURE EWM SITE**
- **Raw Well Water Concentrate**
- **Permeate line**

KBH
Permeate will be treated to meet TCEQ drinking water standards where it will then be pumped into EPWU’s potable water distribution system.
Questions