



Overview of the El Paso Kay Bailey Hutchison Desalination Plant

June 22, 2017

WESTCAS Annual Conference
San Diego, California

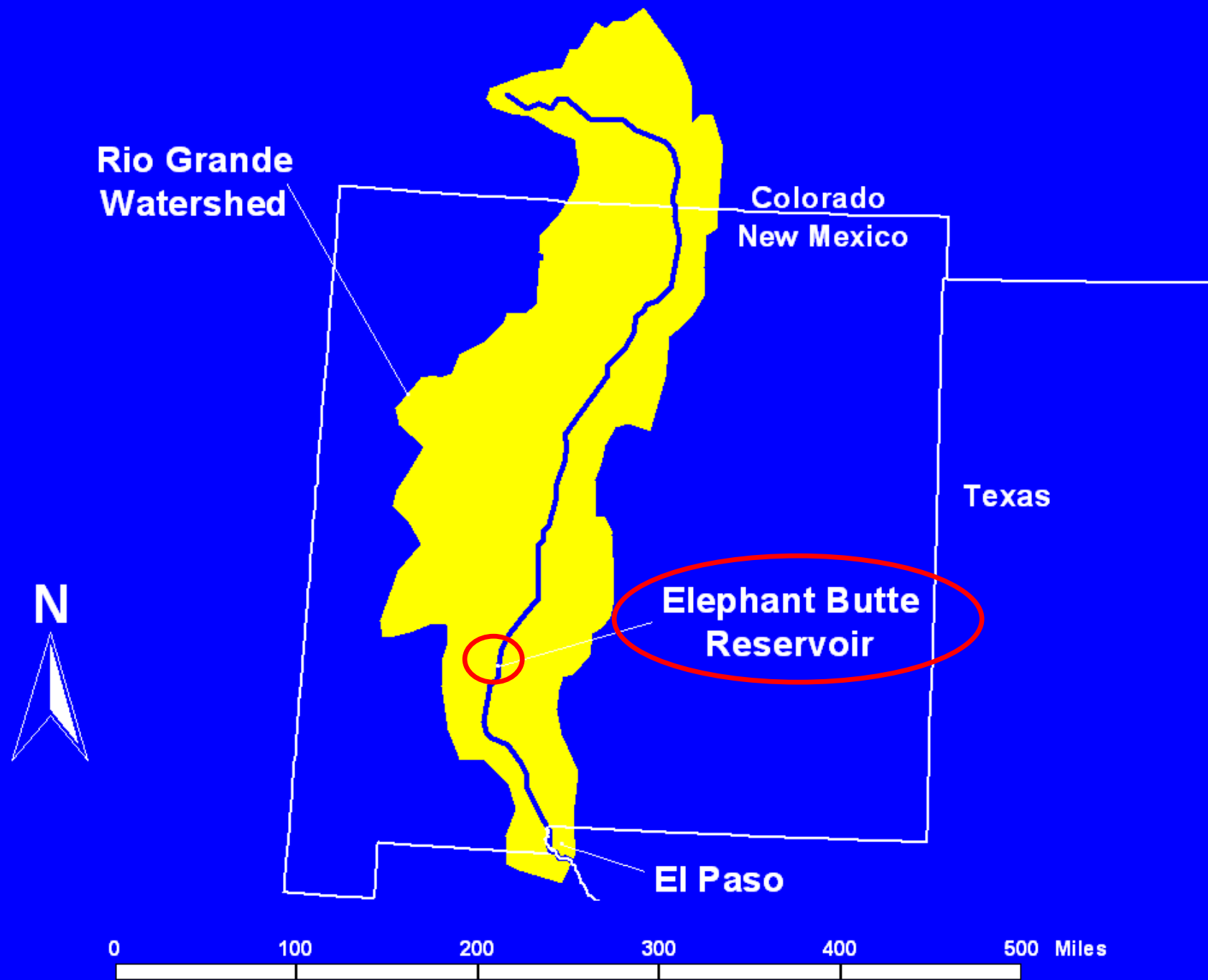
Scott Reinert, P.E.
Water Resources Manager

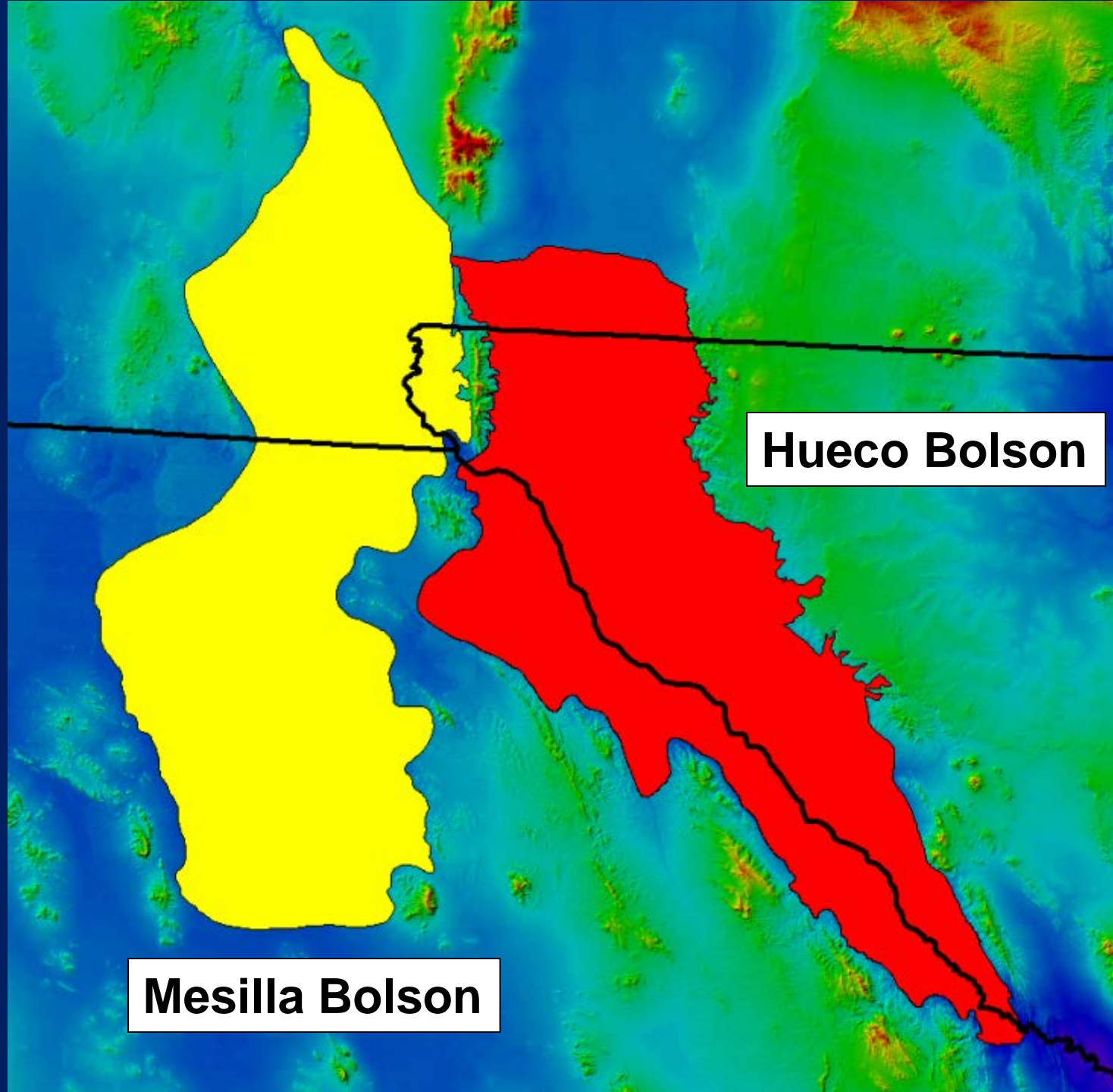


Topics

- El Paso Water Supply
- Drought in El Paso
- Kay Bailey Hutchison Desalination Plant
- Enviro Water Minerals

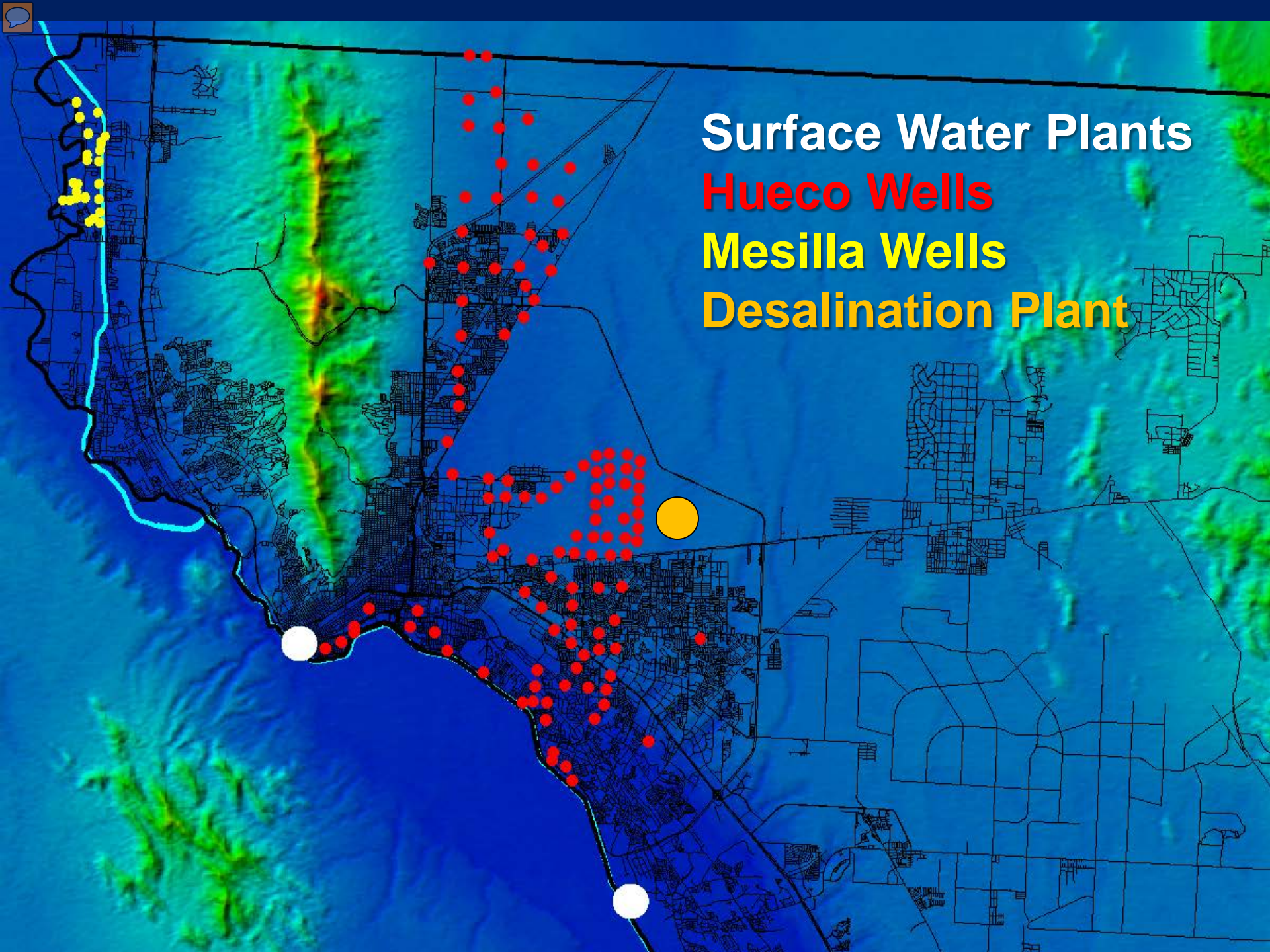






Hueco Bolson

Mesilla Bolson



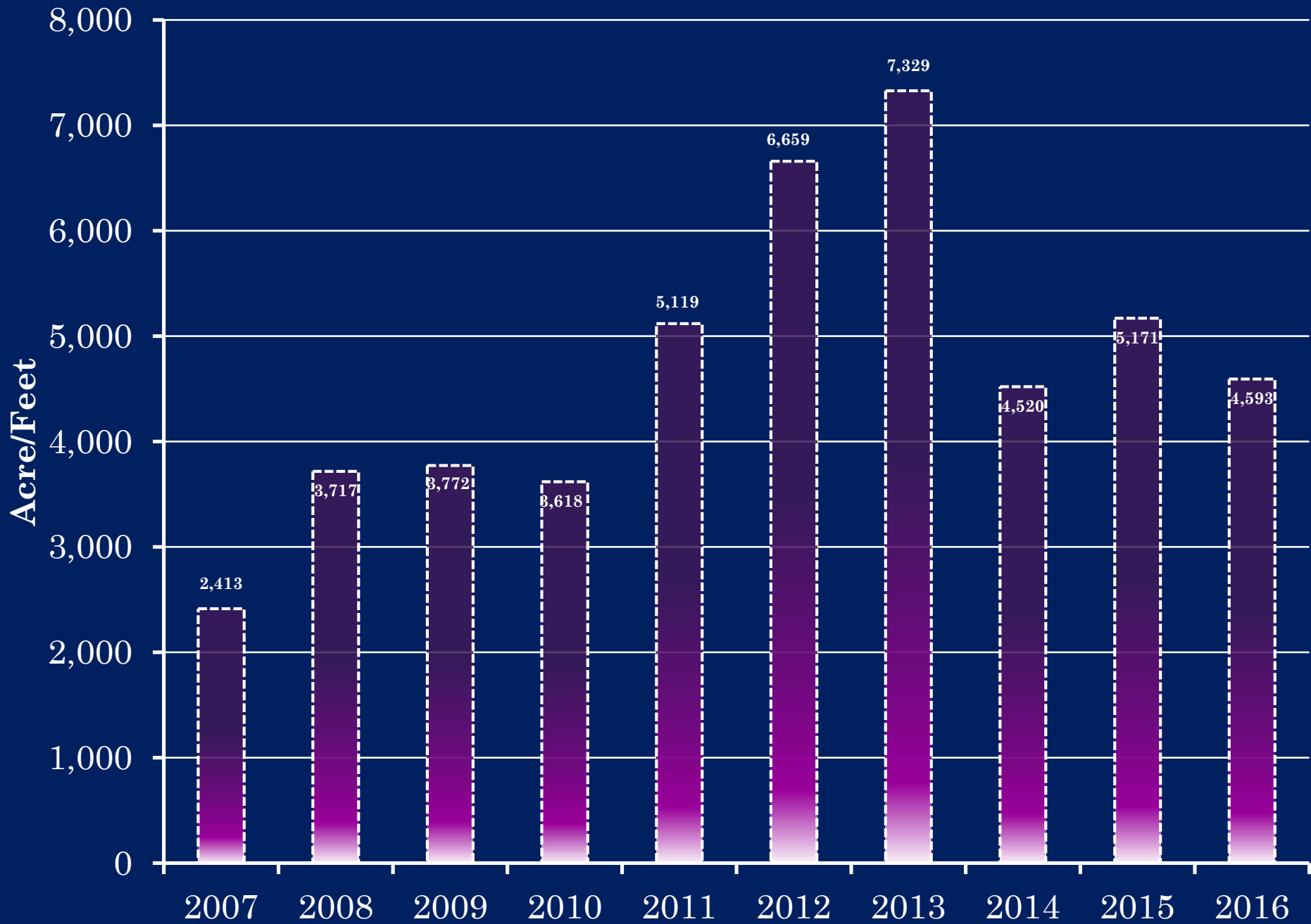
Surface Water Plants

Hueco Wells

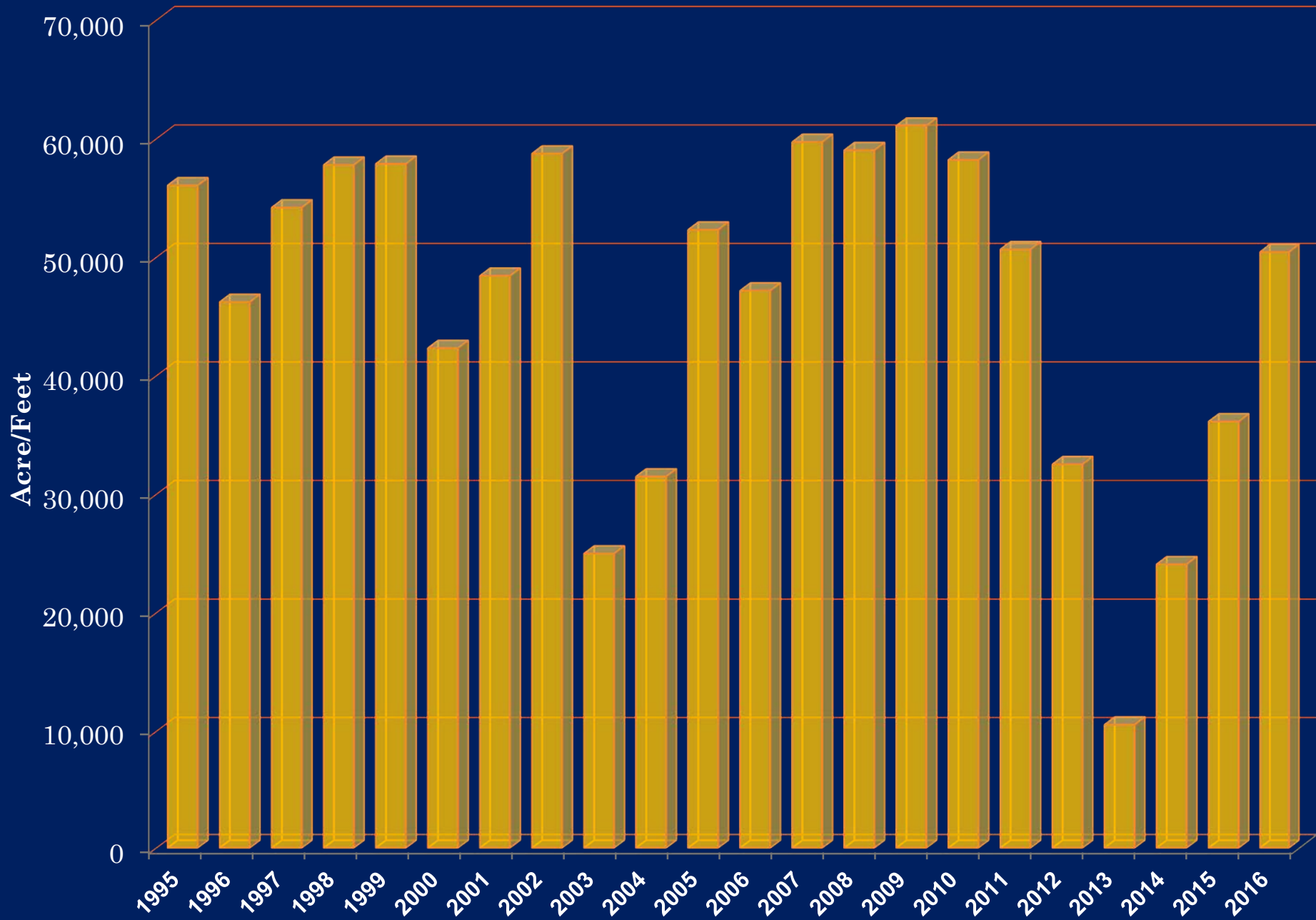
Mesilla Wells

Desalination Plant

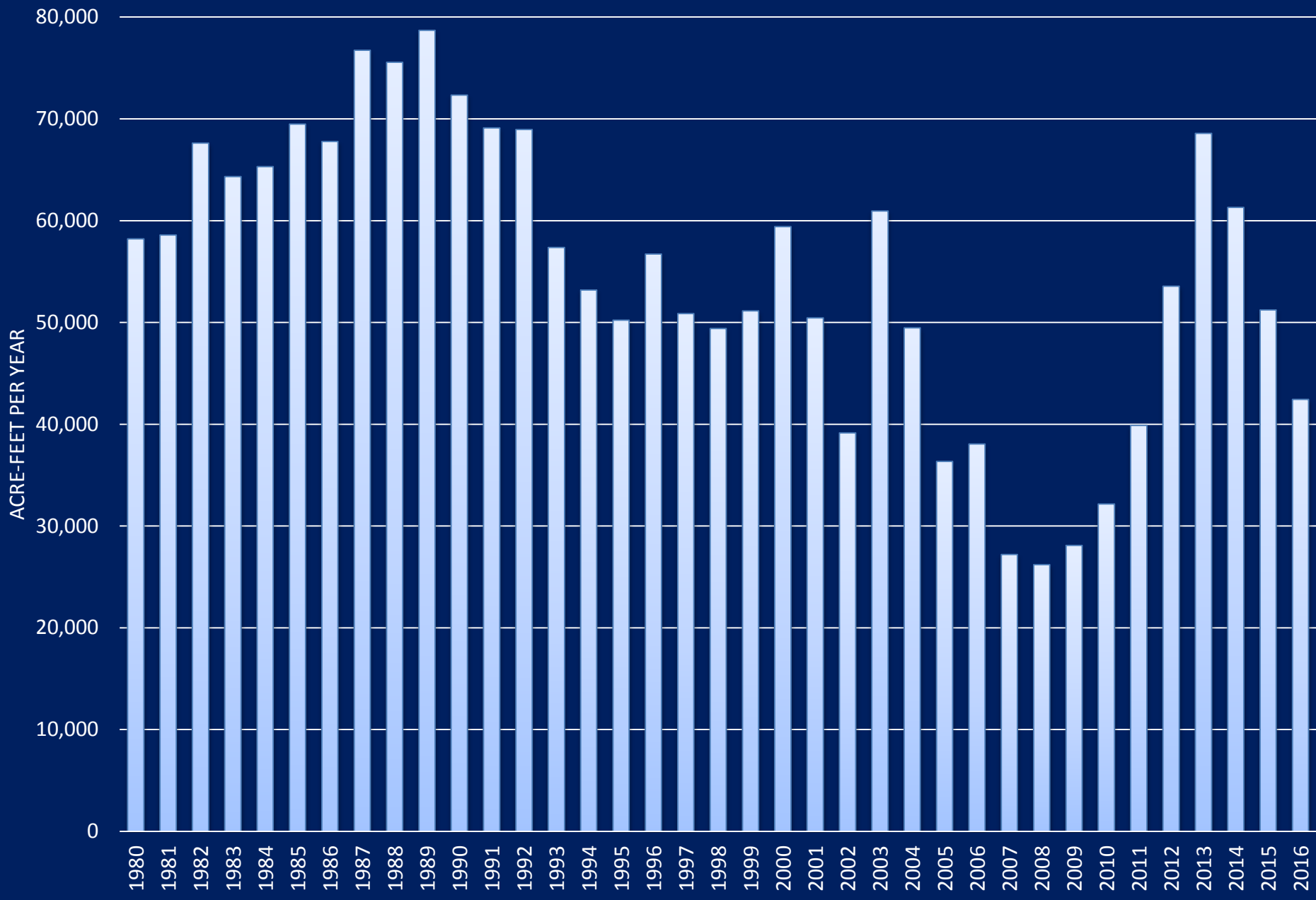
Kay Baily Hutchinson Desalination Plant



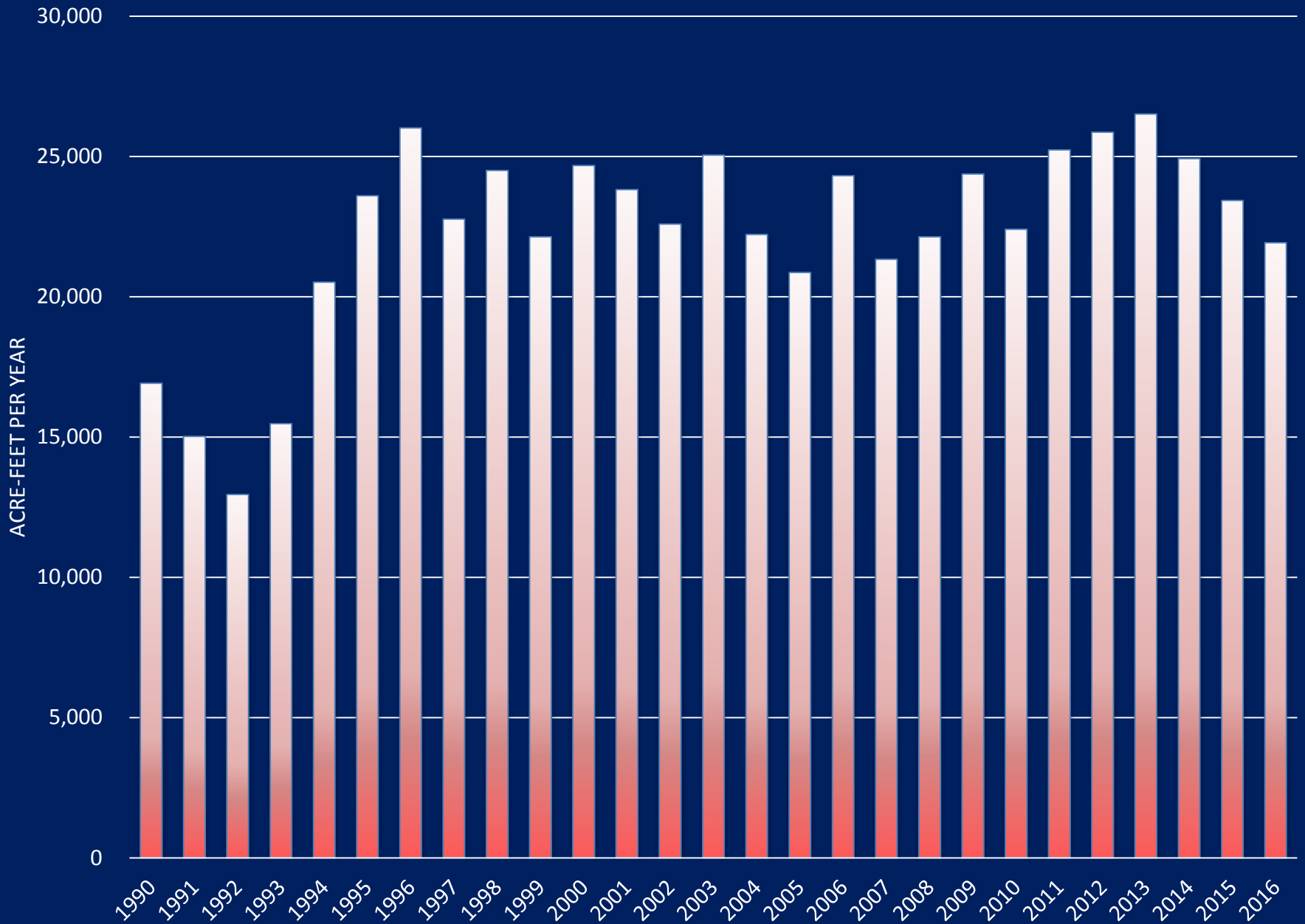
Rio Grande Diversions



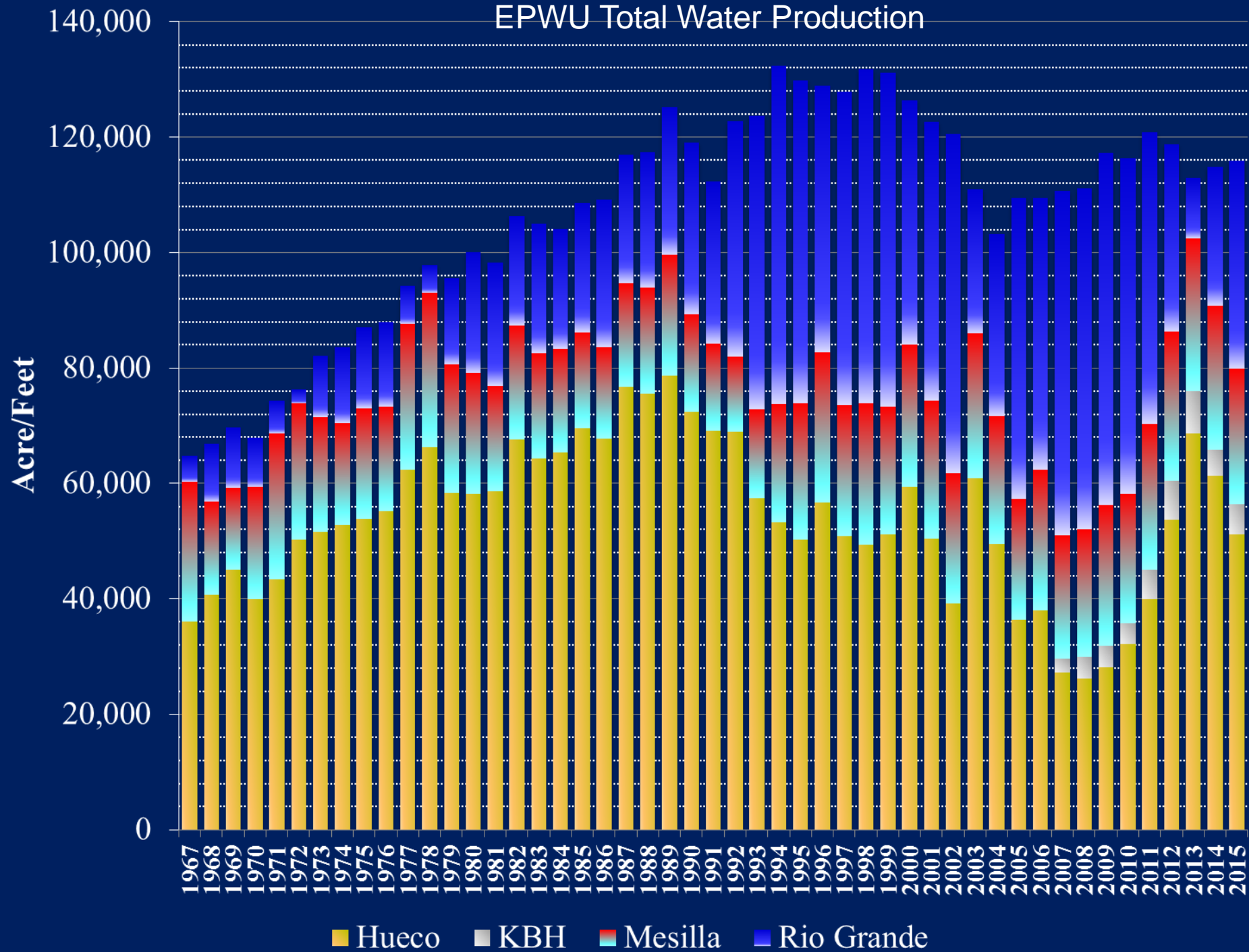
Hueco Bolson Pumping



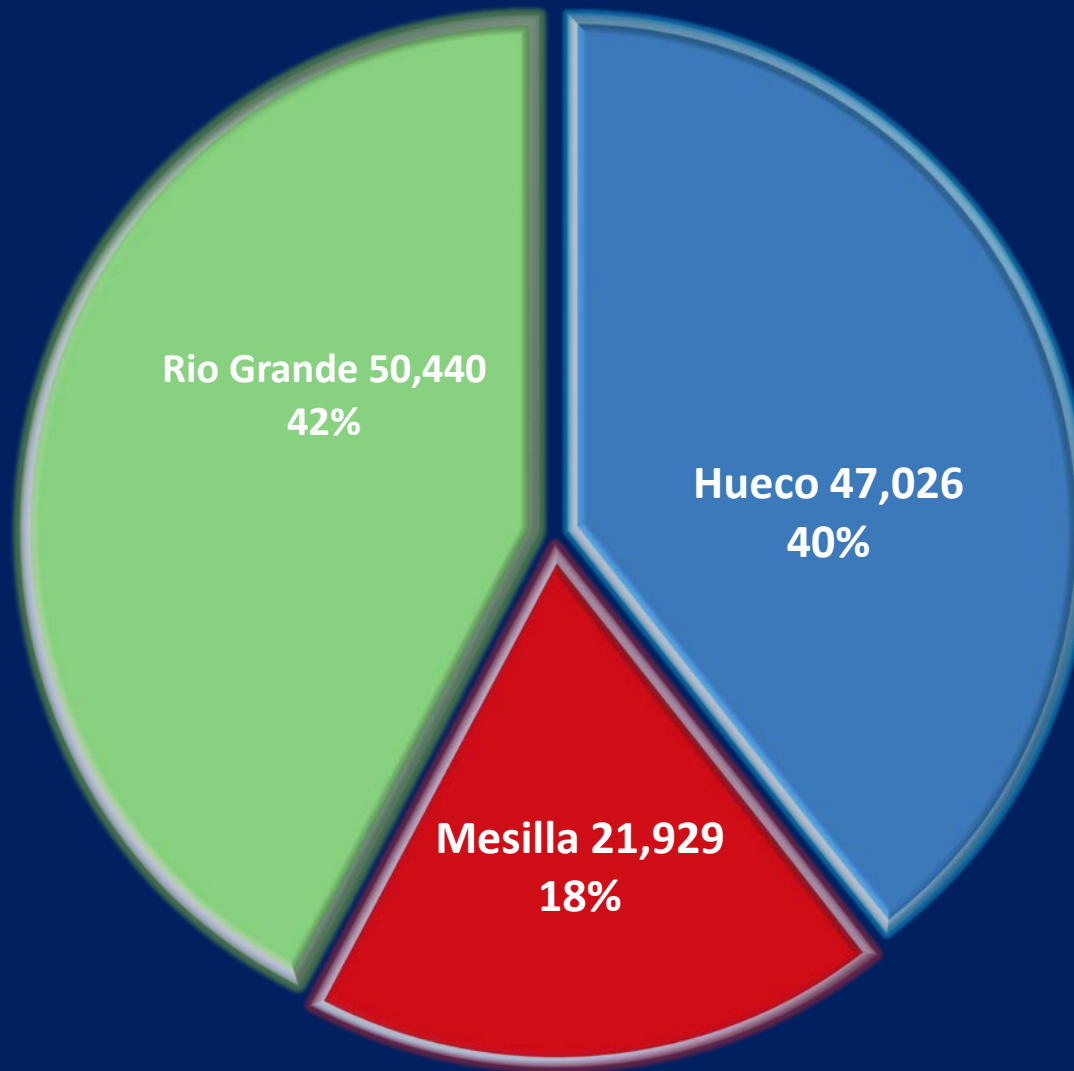
Mesilla Bolson Pumping



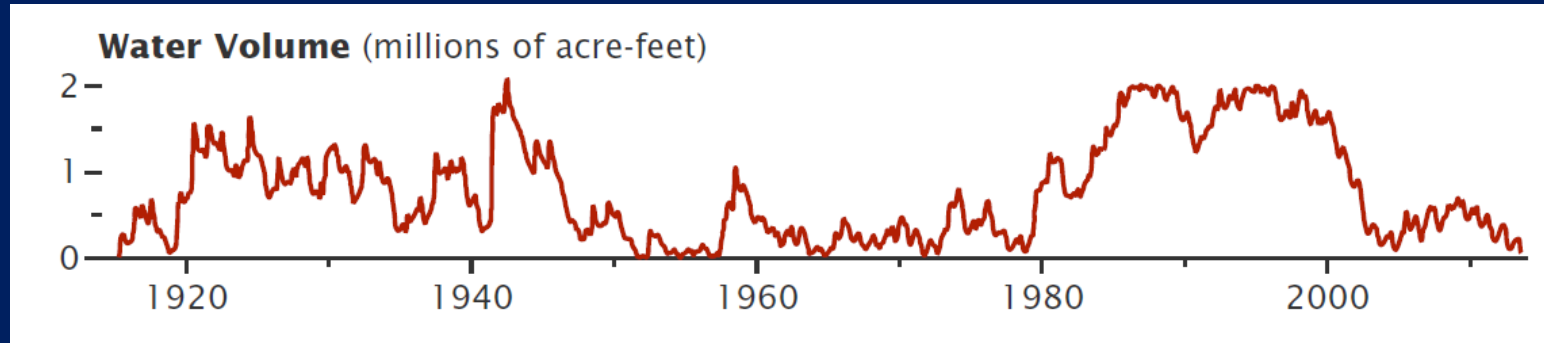
EPWU Total Water Production



2016: TOTAL PRODUCTION Acre-Feet



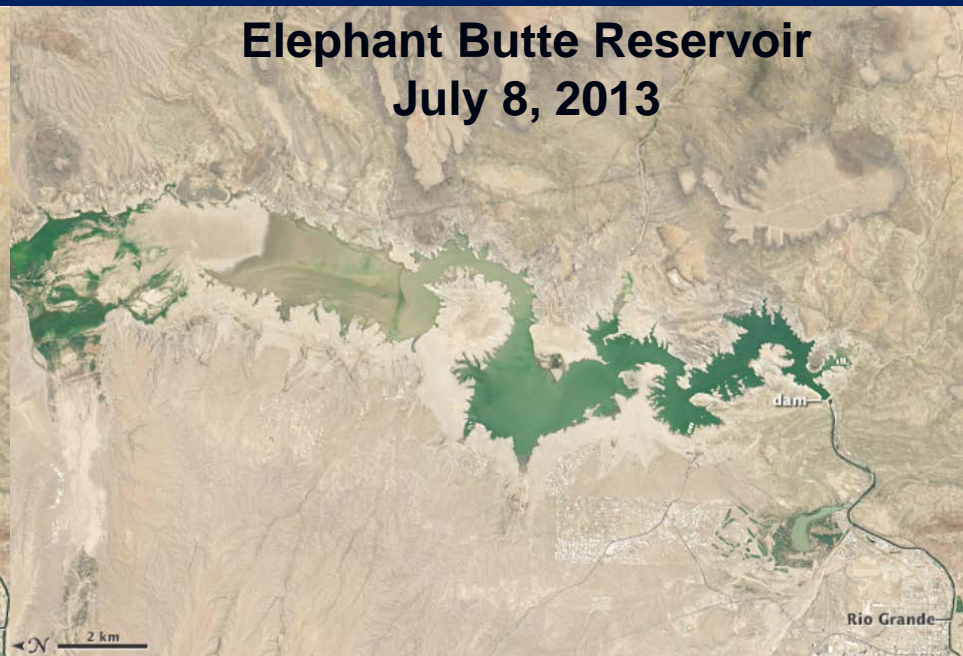
Drought in the Southwest



Elephant Butte Reservoir
June 2, 1994



Elephant Butte Reservoir
July 8, 2013



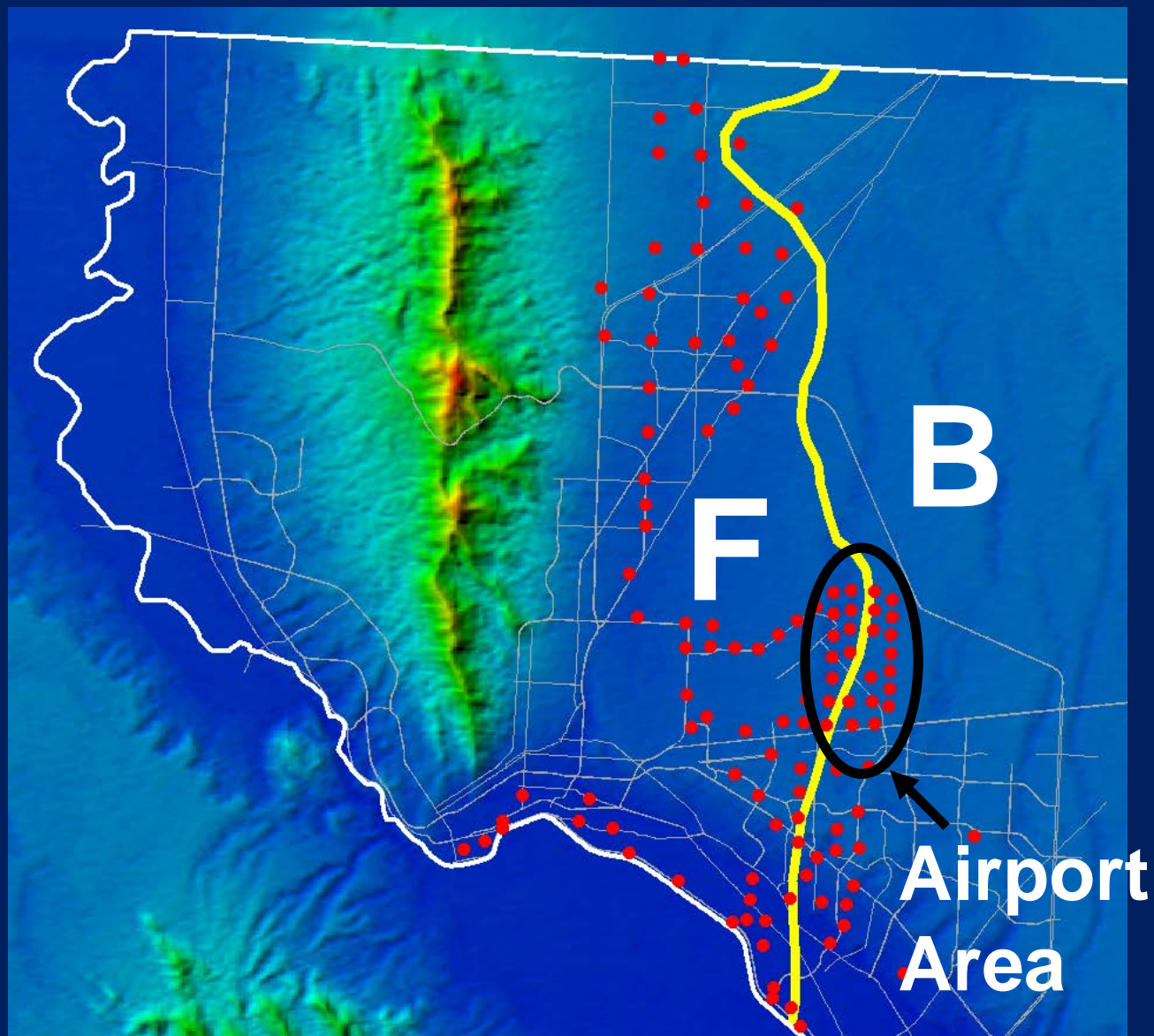
Images from the NASA Website

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

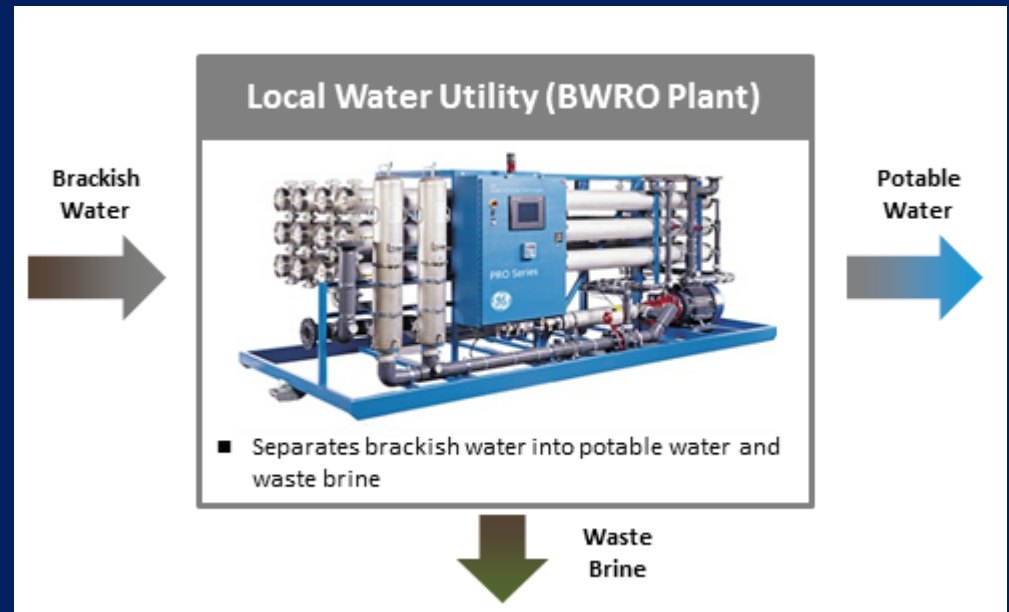


Enviro Water Minerals Company (EWM), Public Private Partnership

- 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.

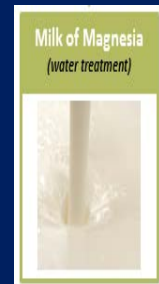
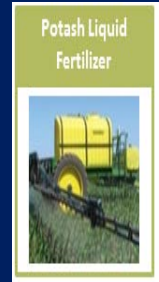
Enviro Water Minerals Company (EWM), Public Private Partnership

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

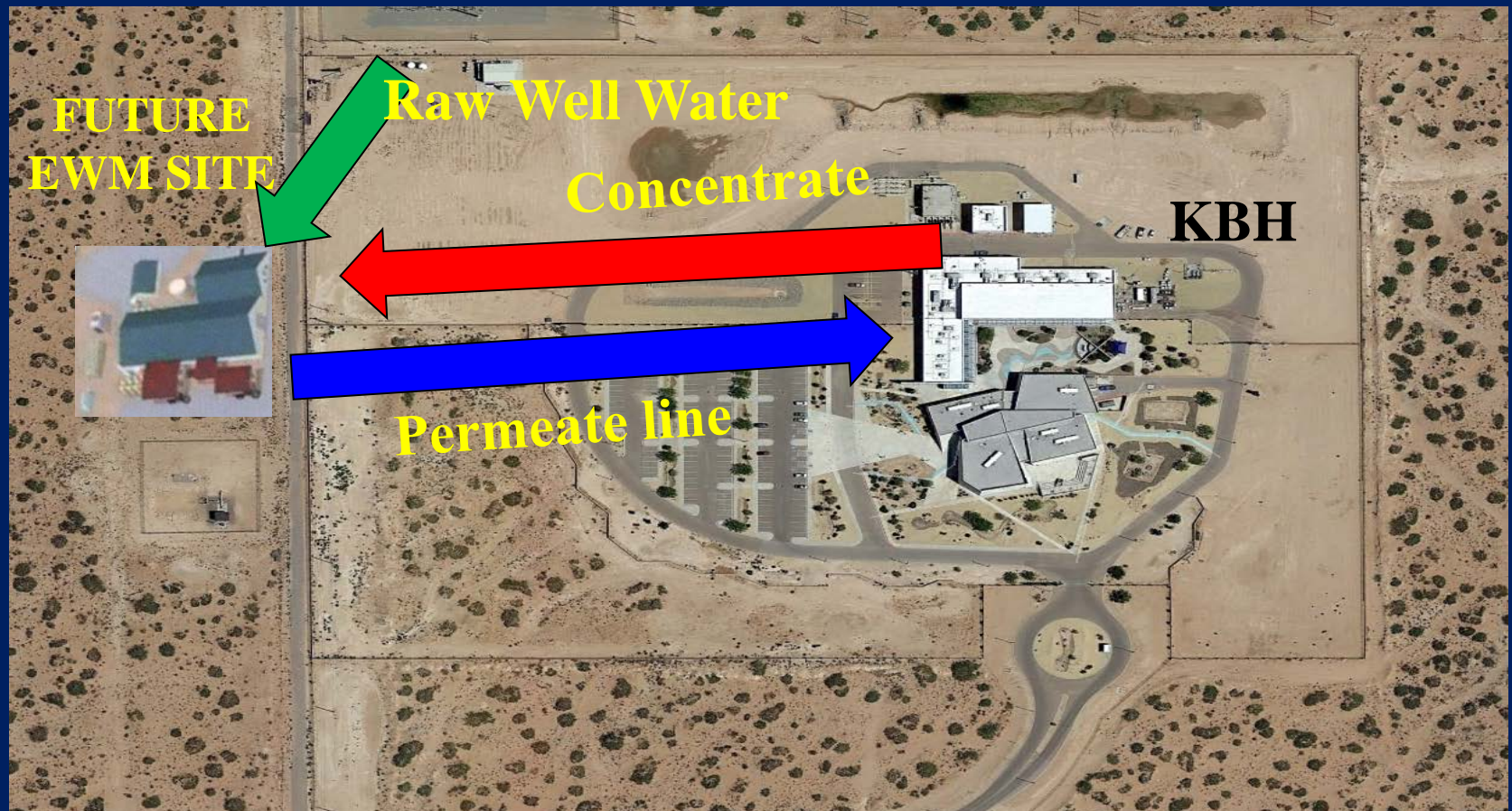


Enviro Water Minerals Company (EWM)

- 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



EWM Proposal & Agreement to EPWU

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



Questions

