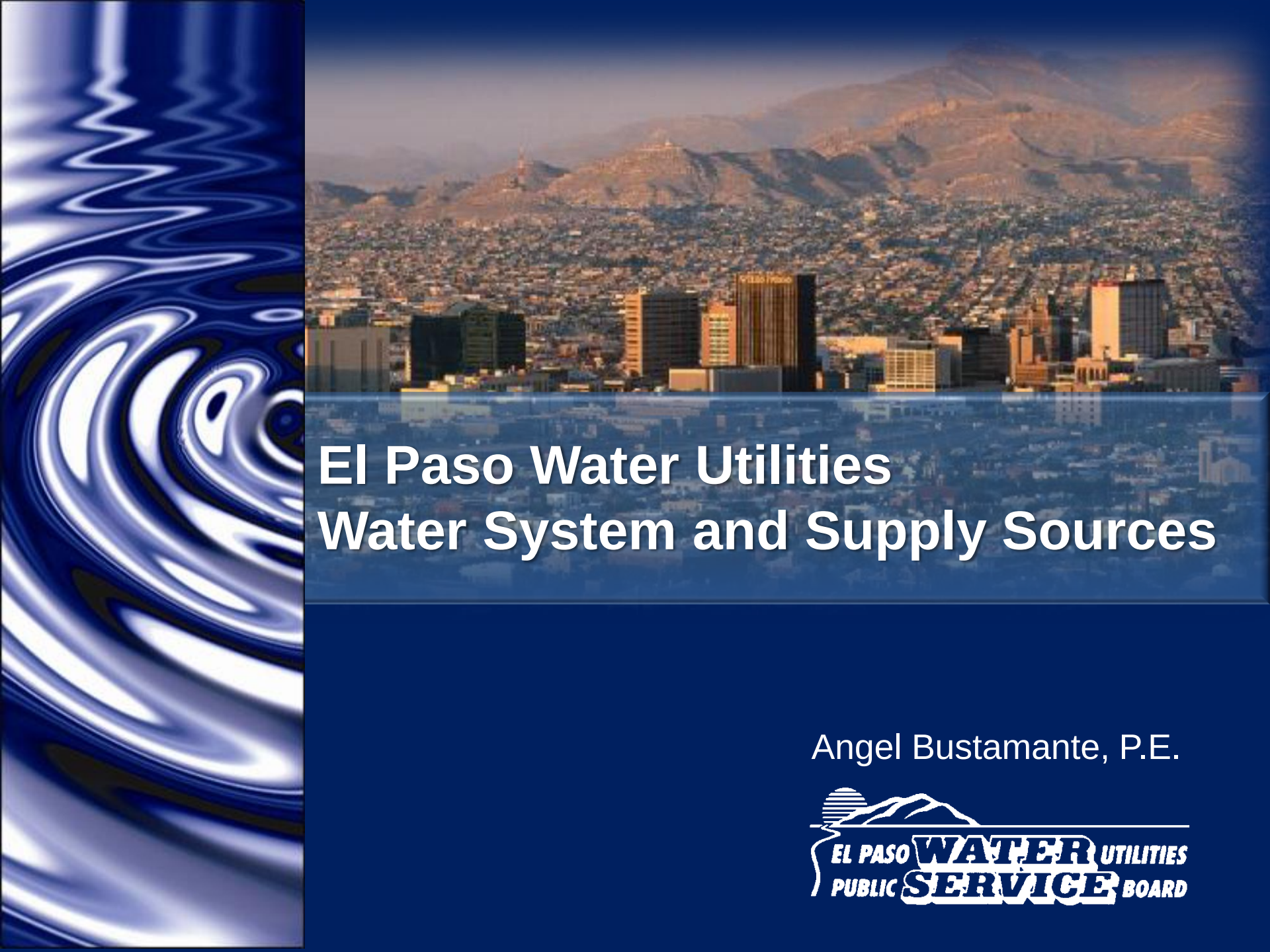




El Paso Water Utilities Water System and Supply Sources

Angel Bustamante, P.E.





El Paso Statistics

- Estimated population in El Paso County is over 850,000
- Approximately 200,000 water service connections
- Average rainfall is 9 to 11 inches per year
- Water conservation is essential





WORKING TOGETHER = WATER FOREVER

Sustainable water is totally doable. Working together, we can balance these resources to make sure we have water for today and tomorrow.

The River

**Underground
Water**

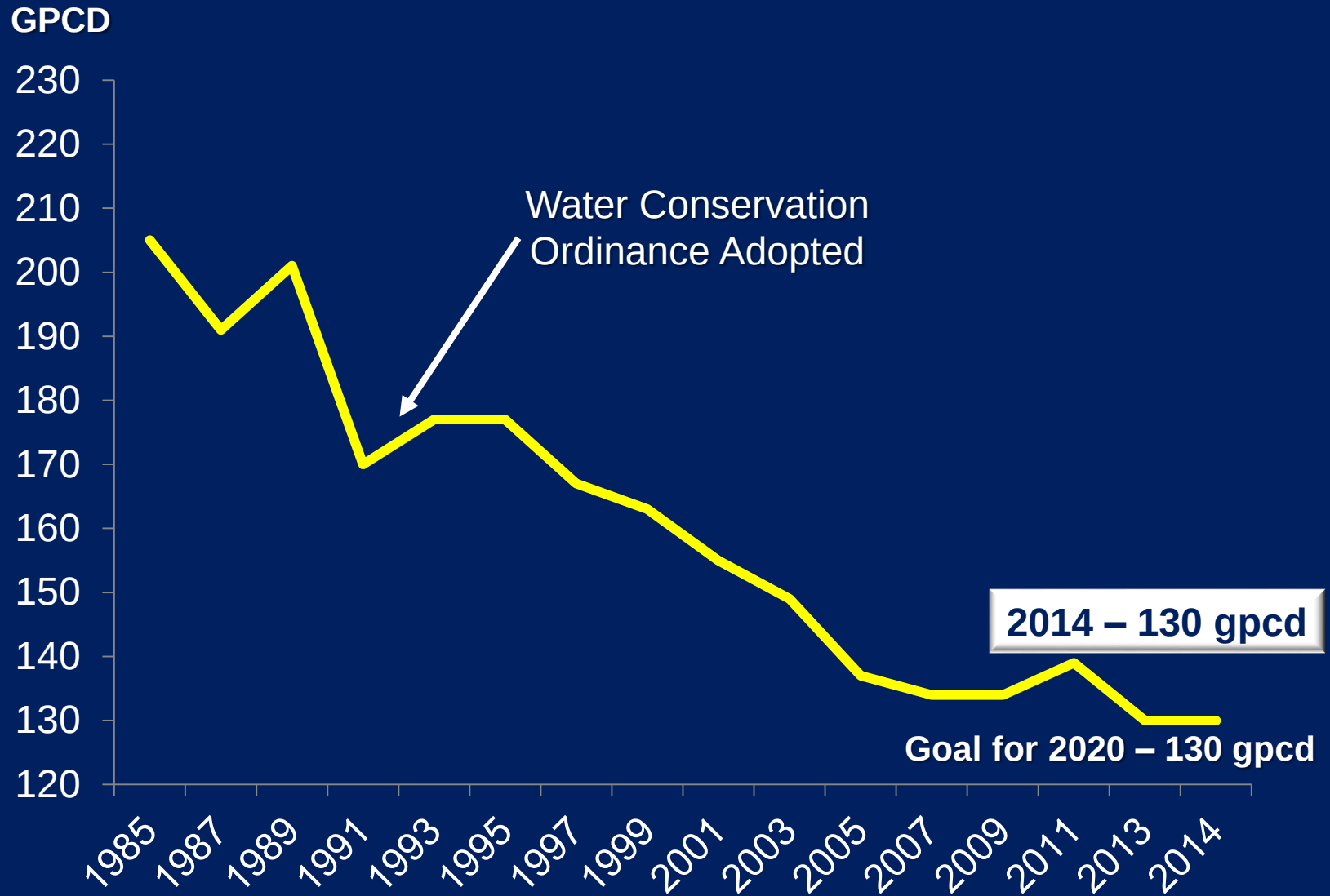
Desalination

**Water
Reuse**

Conservation

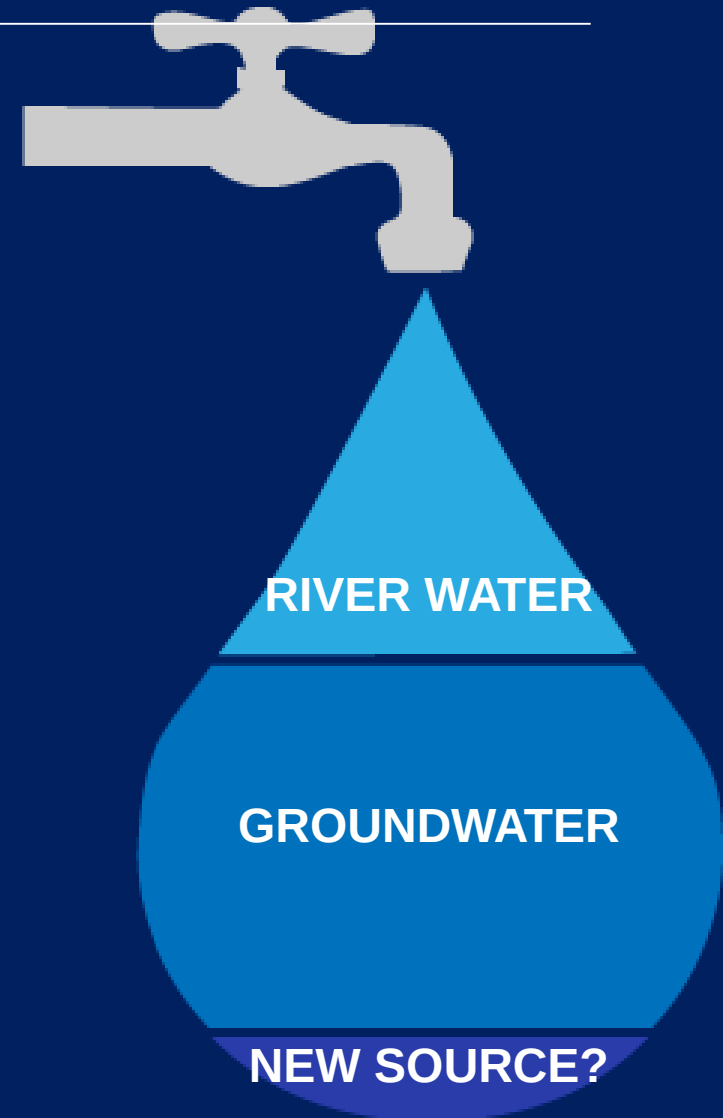
**Future
Resources**

Per Capita Consumption



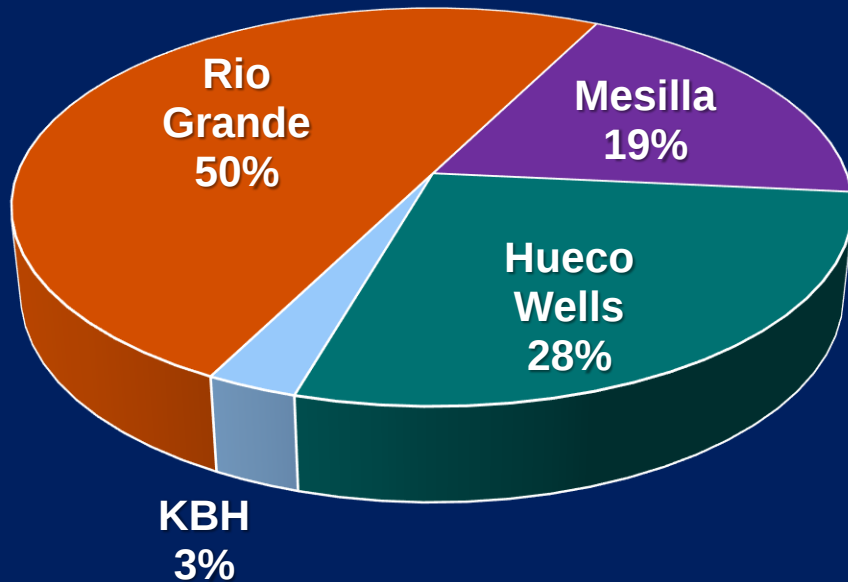
Water Supply

- In 2015, EPW produced approximately 114,000 acre feet of potable water
- Water sources supplying total demand
 - Hueco Bolson 53%
 - Mesilla Bolson 22%
 - Surface water from the Rio Grande 25%

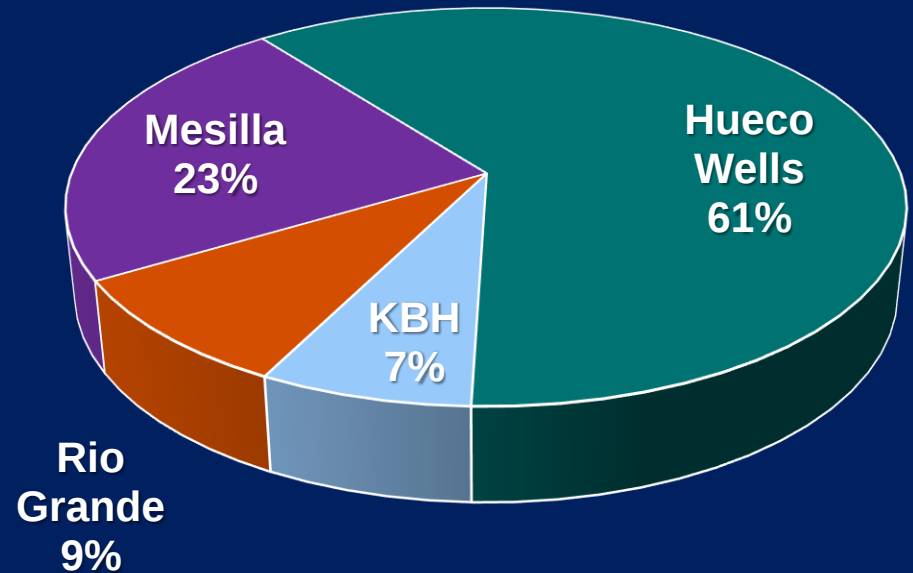


EPWU Water Production

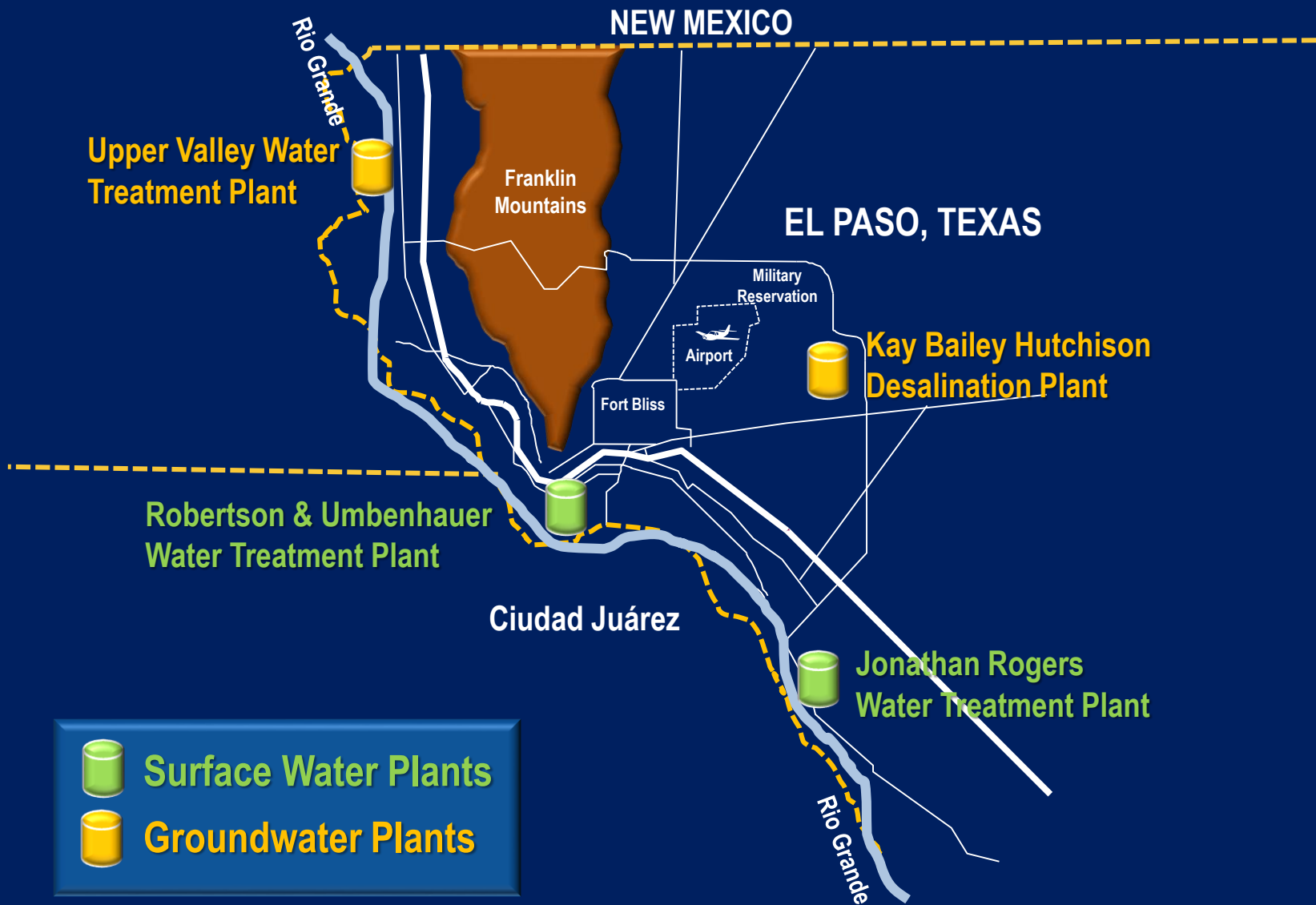
2010
37.9 Billion Gallons



2013
36.8 Billion Gallons



Water Treatment Plants



Kay Bailey Hutchison Desalination Plant



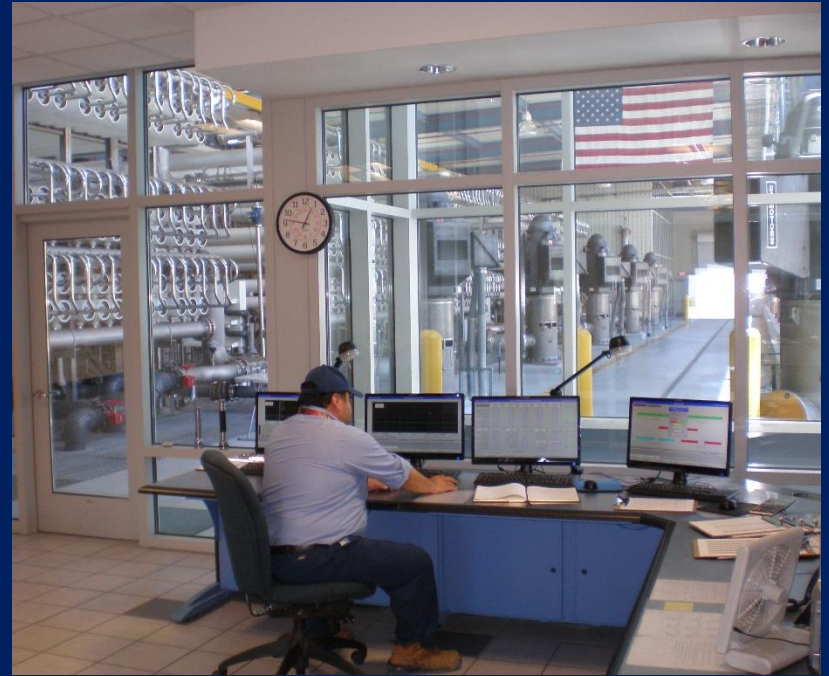
Opened in 2007 to deal with:

- Drought
- Emergency situations
- Growth

27.5 MGD production

Operational Factors for Desalination

- Electrical cost
- Disposal of the concentrate



NEW MEXICO

TEXAS

DEEP WELL
DISPOSAL SITE

BLEND WELLS &
COLLECTION LINE

Loop 375

SOURCE WELLS

RO PLANT SITE

CONCENTRATE LINE
BY DEEP WELL DISP.

© 2003

© 2003

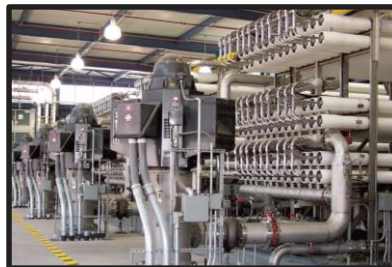
Concentrate Disposal



WHAT EWM DOES

EWM separates waste brine into commodities, allowing access to vast sources of additional freshwater supplies

Illustration of EWM's Solution



Kay Bailey Hutchison Desalination Plant concentrate

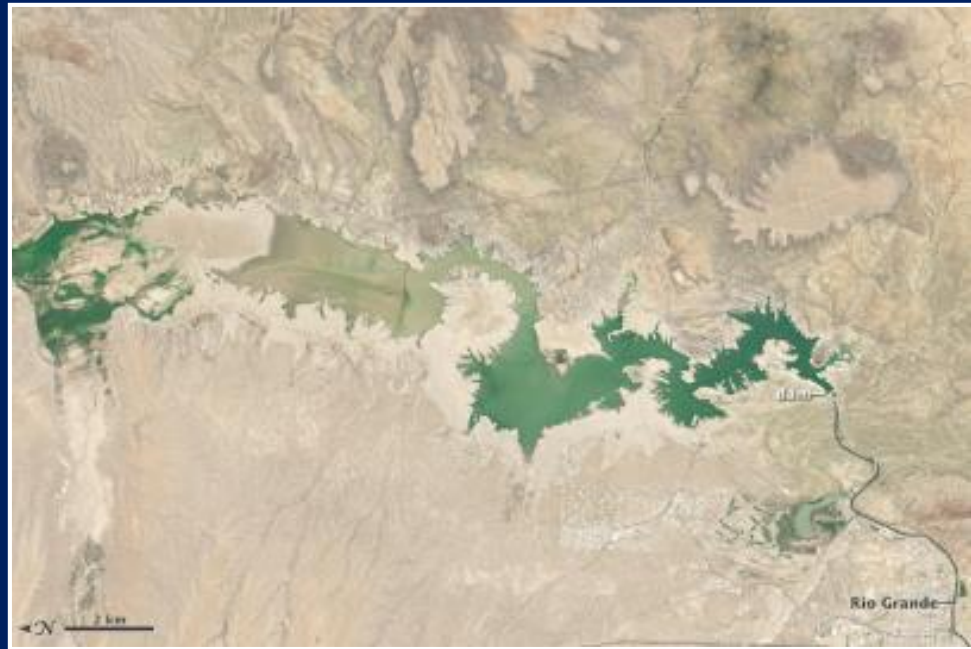


Current Drought Conditions in El Paso

**Elephant Butte Reservoir
June 2, 1994**

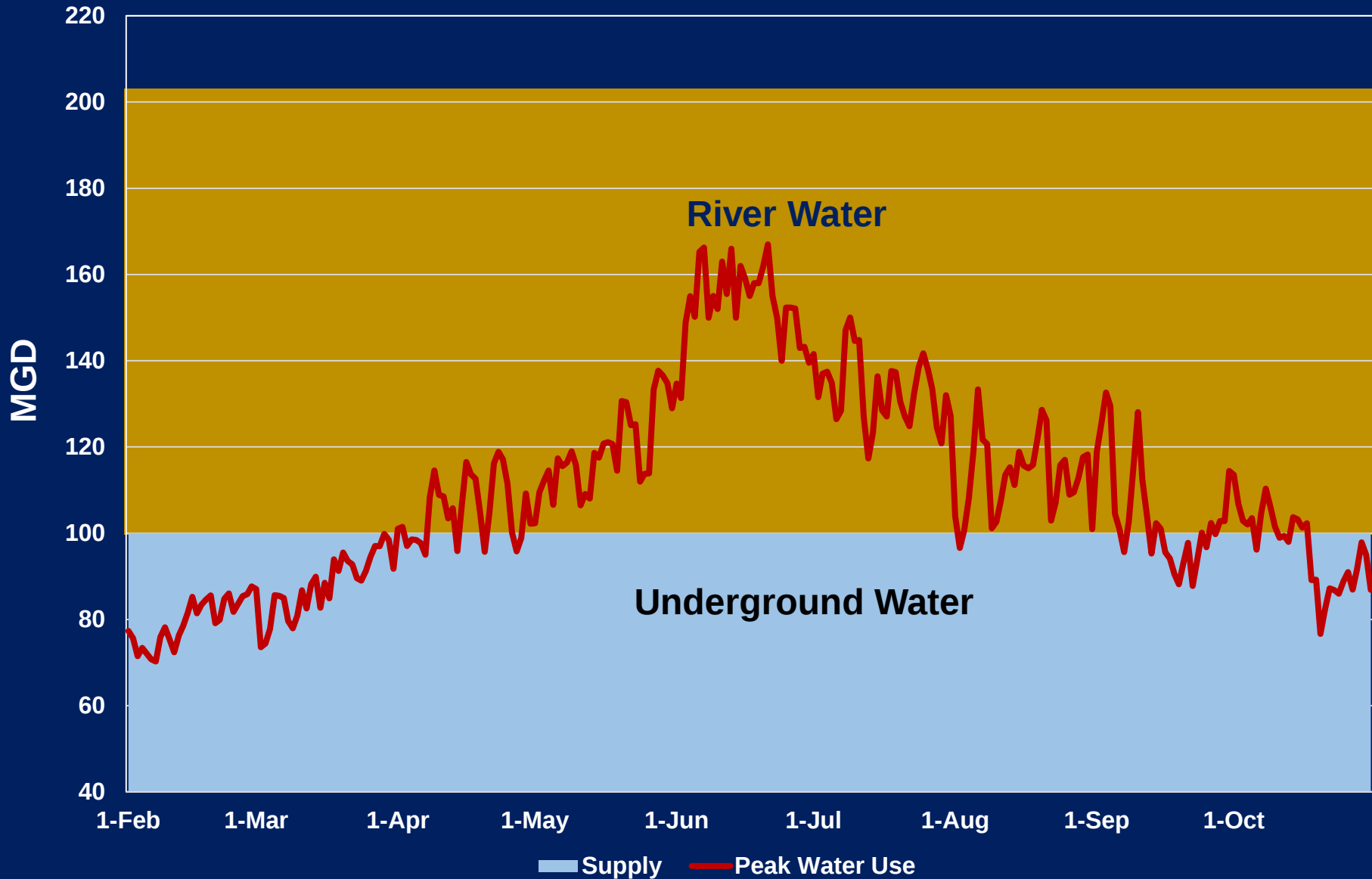


**Elephant Butte Reservoir
July 8, 2013**

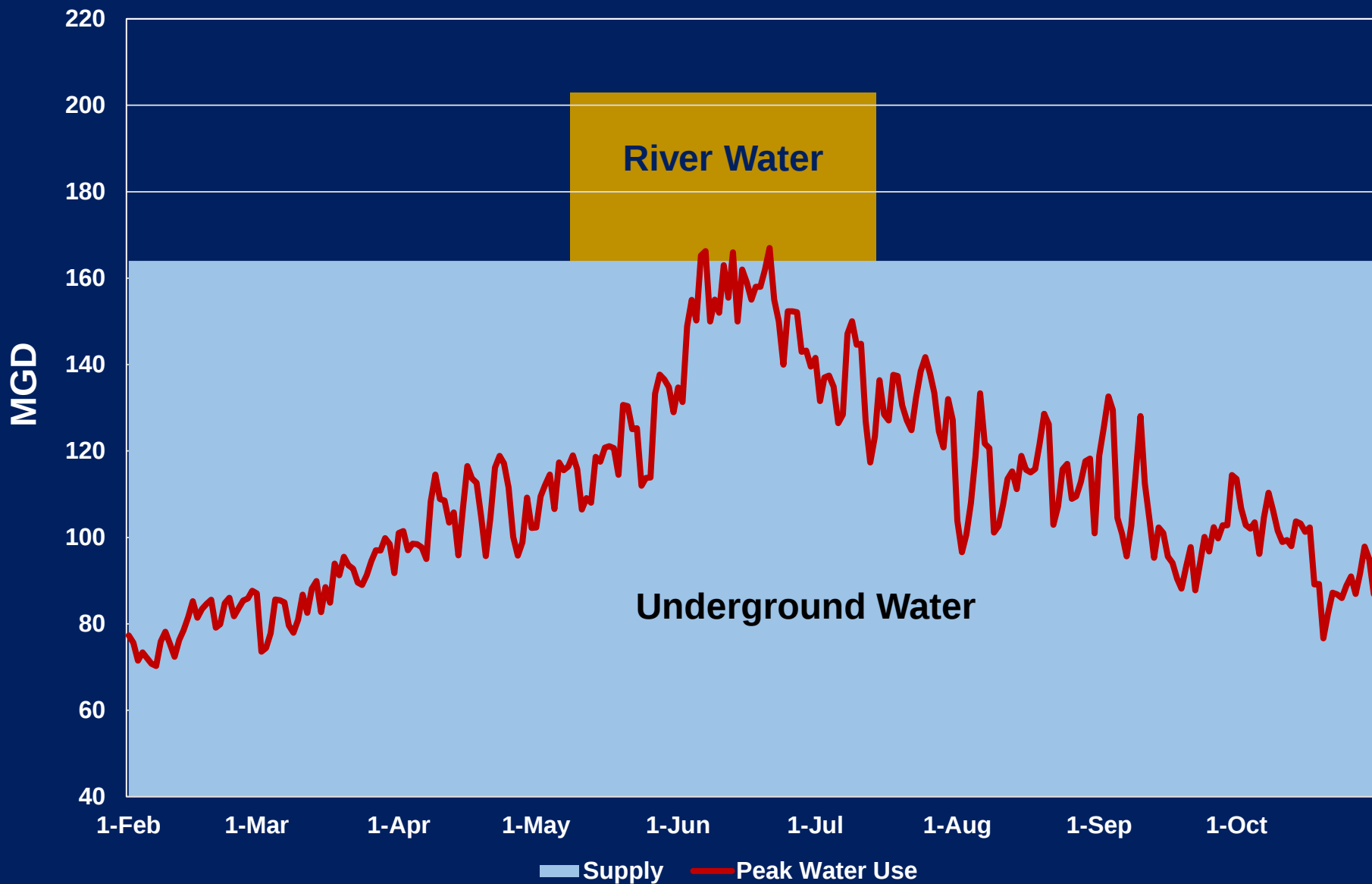


Images from the NASA Website

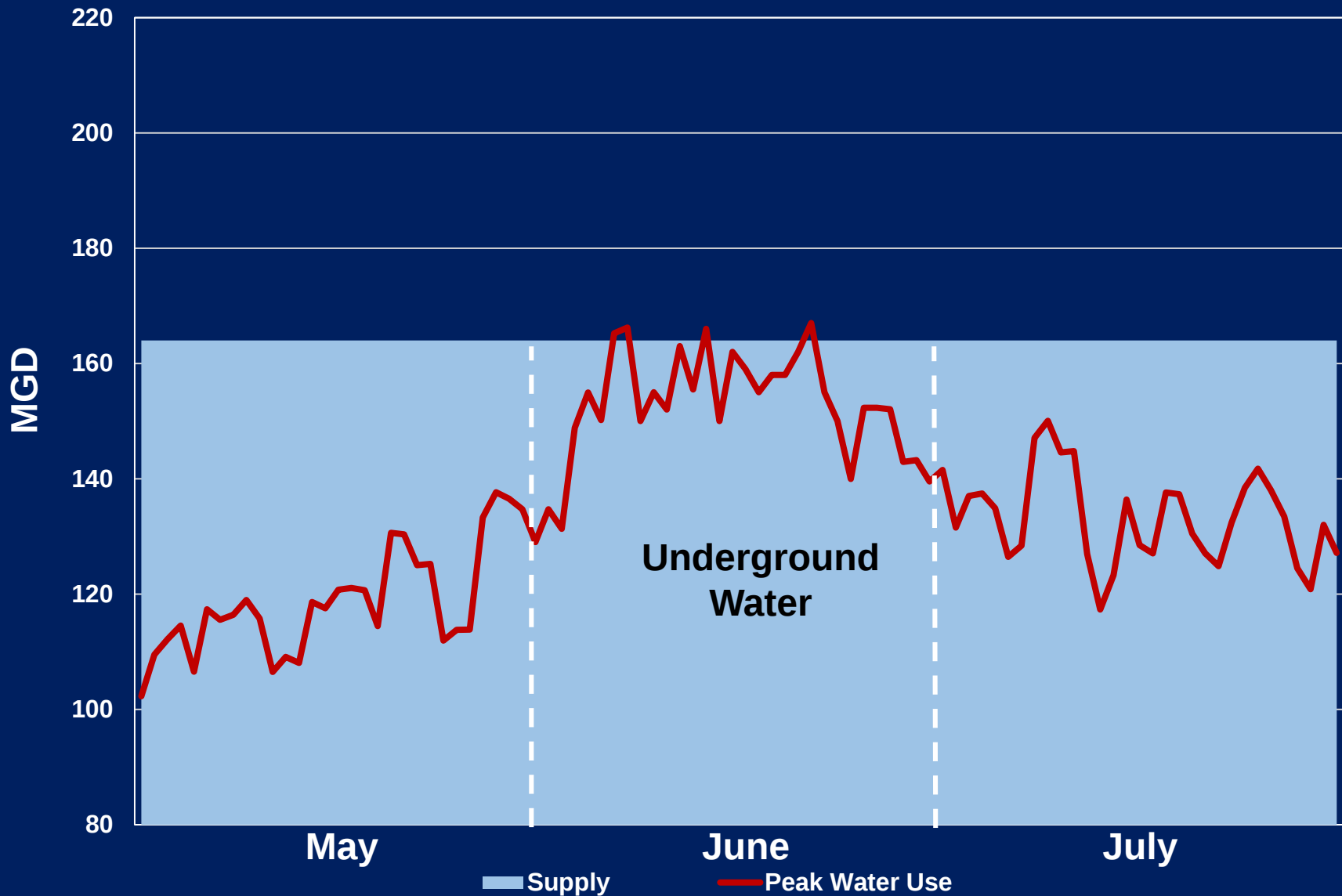
Non-Drought Year



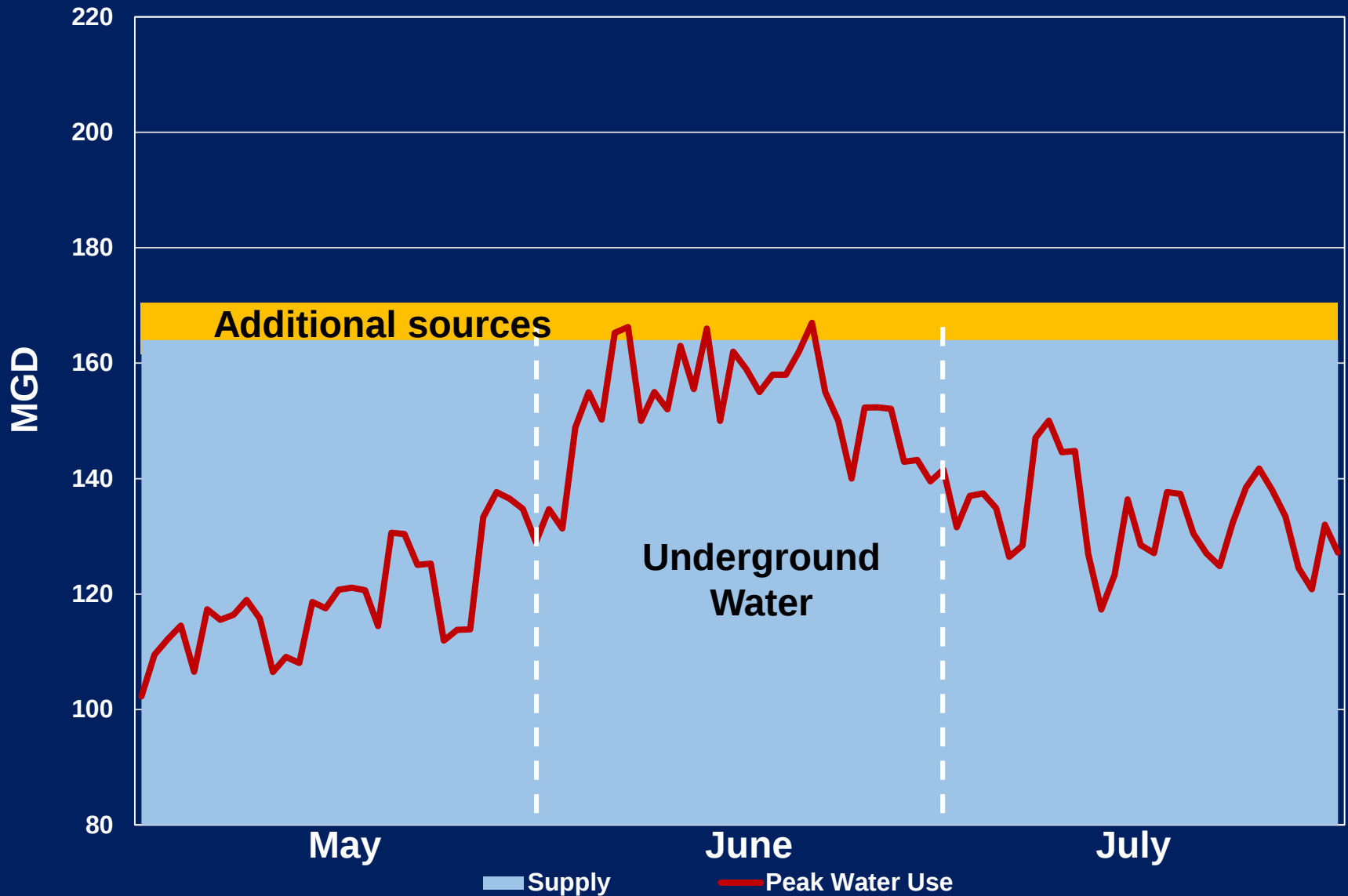
Drought Year



Drought Year Without River Water



Drought Year Without River Water



Estimated Capital Needs

Needs	Cost
Expand desalination	\$30 M
Agricultural drain water purification	\$30 M
Rogers Plant expansion and recharge	\$115 M
Advanced purified	\$100 M
Water rights land purchase	\$50 M
Near importation project	\$80 M
Regulating reservoir	\$80 M
Far importation project	\$400 M
TOTAL	\$885 M

Conclusions

- El Paso is a dry and arid city that cannot depend on consistent surface water allotment
- El Paso Water understands the importance of having a diverse water supply portfolio
- El Paso Water management decision to implement alternative sources of supply such as brackish groundwater



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