The Future of Salinity and Water in Texas (and the Southwest?)

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presented at

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"Don't drink downstream of the herd."



de facto reuse in the Trinity River

 500 million gallons per day of treated wastewater from DFW Metroplex

- effluent-dominated river
 - 50% of normal flow
 - 80% in times of drought
- primary source of water (66% of supplies) for Houston

from NRC (2012)

NORTH TEXAS MUNICIPAL WATER SUPPLY DISTRICT EAST FORK RAW WATER SUPPLY PROJECT

Water Supply Impact

Lake Lavon Yield: 104,000 ac-ft/yr (93 MGD) East Fork Water Supply Project: 102,000 ac-ft/yr (91 MGD)



Total Yield: 206,000 ac-ft/yr (184 MGD)





Raw Water Production Facility, Big Spring, Texas



John Grant, Colorado River Municipal Water District

photo by Torin Halsey, Time Record News

Big Spring Reclamation Project





"I guess that means I get to drink my beer twice..."



images from Daily WOD Wear



El Paso Advanced Water Purification Facility

El Paso, Texas, USA - Designing and conducting a nine-month pilot test of an Advanced Water Purification Facility to become the second true Direct Potable Reuse plant worldwide; purifying water to diversify the water supply for El Paso, Texas.

10	
MILLION GALLONS PER DAY RECYCLED	č.
9	
MONTH PILOT TEST	



reuse strategies and supplies for 2050 for Texas













Enviro Water Minerals Company El Paso EWM P1

Salinity in the Rio Grande and Pecos River

map by Robert Szucs/USACE

stormwater

image by OverlordQ/Wikiproject

BIZARRO

WATER FORWARD INTEGRATED WATER RESOURCE PLAN

- Austin Water is leading the development of a 100 year water plan that reflects our community's values
- Goal: Ensure a diversified, sustainable, and resilient water future, with strong emphasis on water conservation

It's easier to take care of the environment when people are taken care of.

takeaways:

We're not as salty as you think

- Reuse has a big future in Texas
- Brackish desal is probably a mediumterm solution
- Seawater desal is a long-term solution
- Need to deal with brine disposal
- Opportunity for stormwater reuse
- Climate change will force solutions

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