

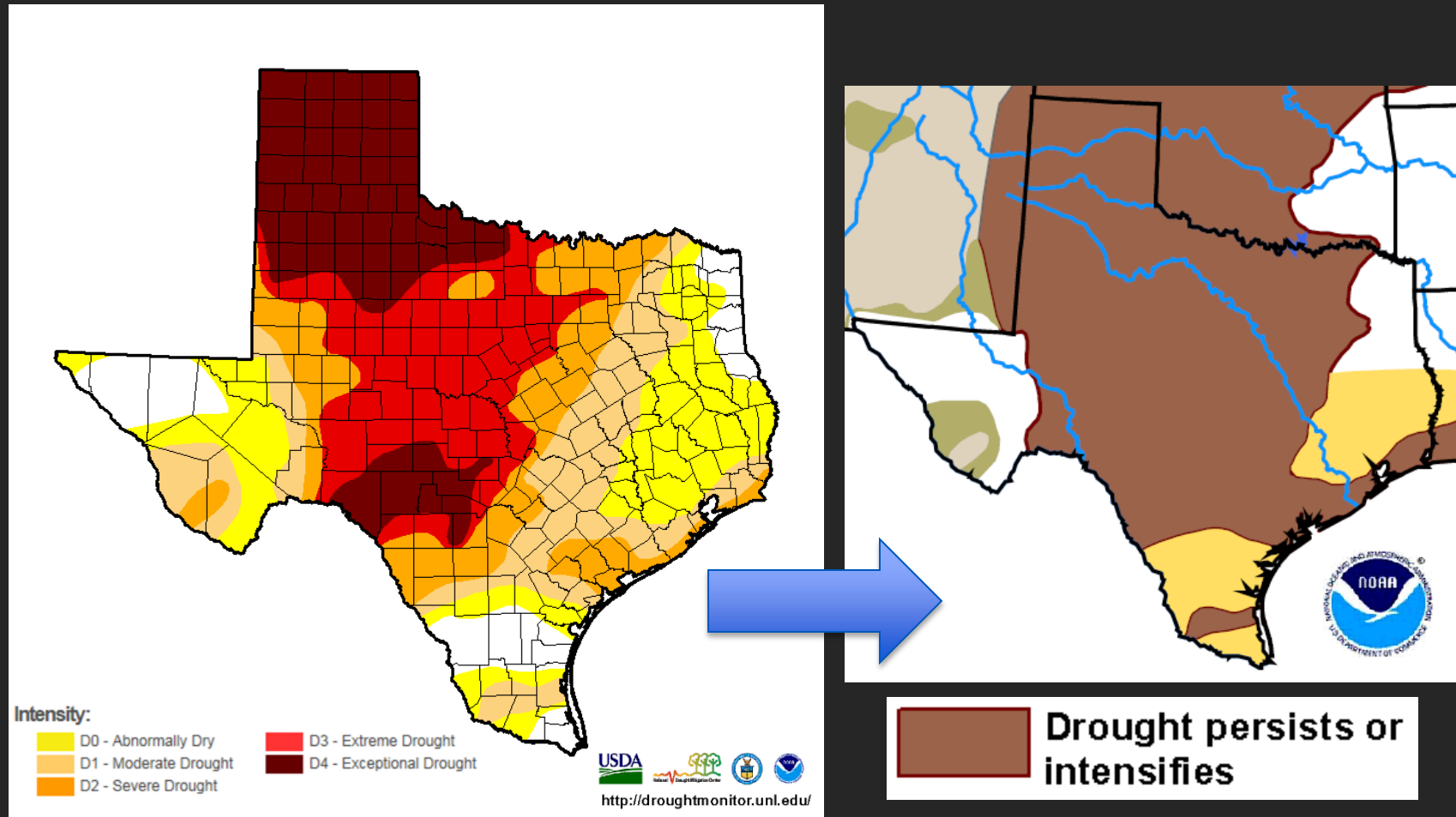


# Water Recycling in Texas

Bob Bennett, VP Water Management  
Steve Monroe, Product Line Manager

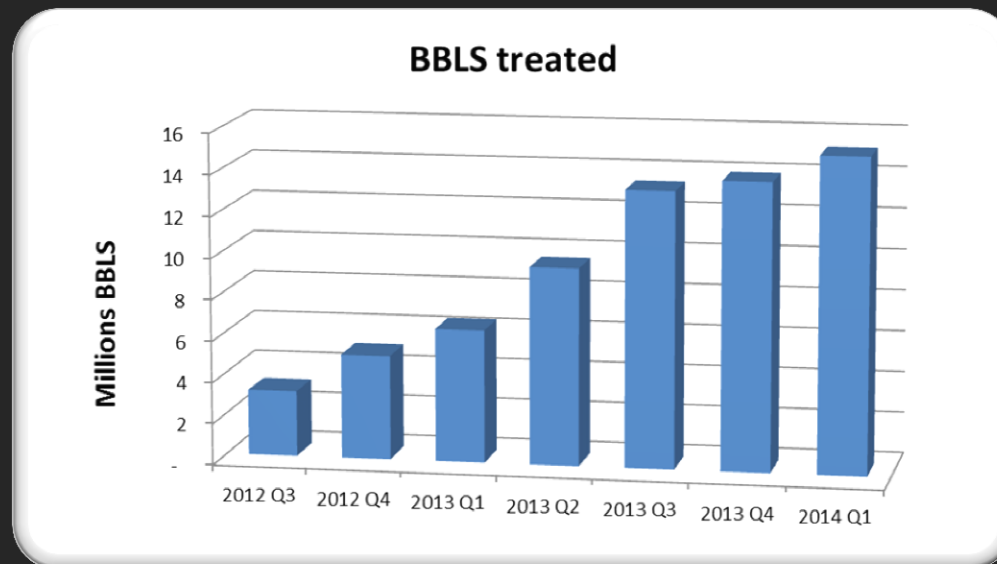


# Texas Drought Conditions – No Relief in 2014?



# 2014 – A Transitional Year

- 50 Million barrels of water treated in Texas over the last two years
  - 30 Million barrels in 2013
- Very little recycling in 2012 – Growing trend in 2013
  - New rules encouraging recycling
  - Cautious first steps with blending
  - Infield modular treatment with environmentally preferred solutions



# H2prO™ Treatment Services Technologies

## Heavy Metals and Solids

HMS

- Electrochemical precipitation of contaminants and heavy metals
- 90 to 95% water recovery for reuse
- Adaptable to feed water changes
- Minimizes non-productive time

## H2S and Disinfection

HD

- Removes H<sub>2</sub>S, organics, and bacteria
- Highly selective oxidizer
- Green chemistry: FDA approved

## Solids Removal

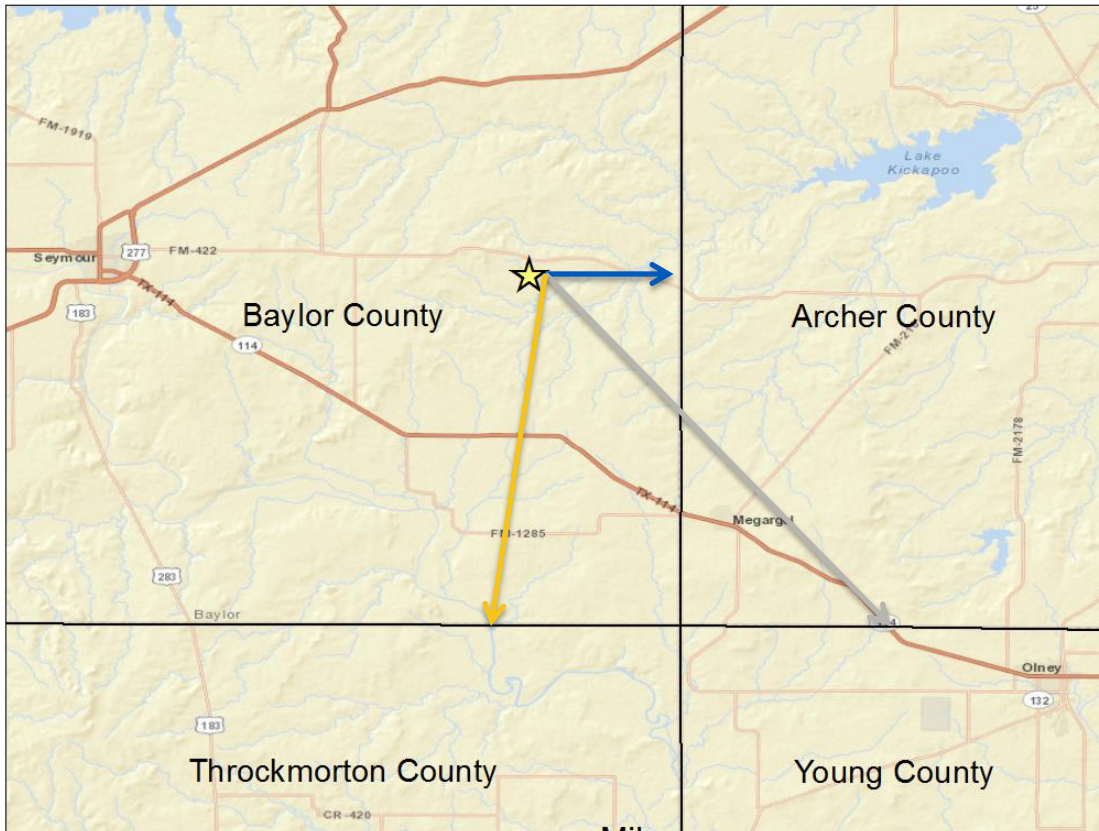
SR

- 99.9% water recovery for reuse
- Inexpensive with all flowback and produced waters
- Compact footprint



Texas Capacity  
1.5MM BWPD

# Barnett Shale – Recycling Benefits

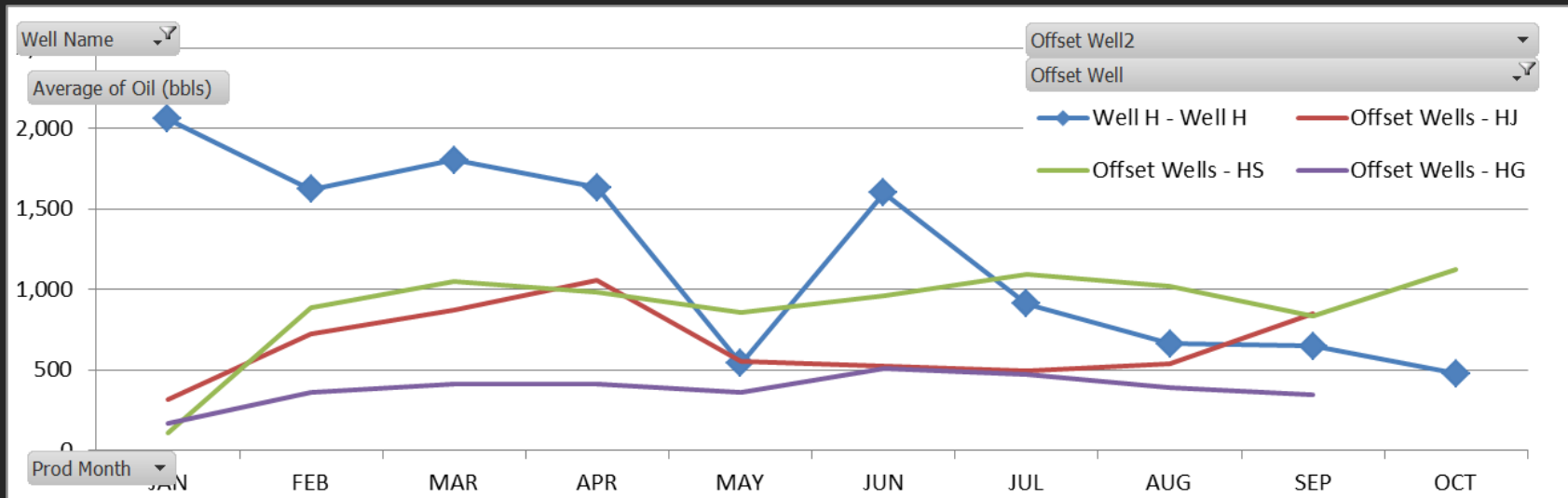


- 28,000 bbl water recycled
- Reduced disposal by 98%
- 276 truck trips averted
- 1300 gallons of fuel saved
- 15 tons CO2 avoided

	From	To	Miles
<b>Minimum</b>	Wellsite	Archer County Line	5.4
<b>Maximum</b>	Wellsite	Young County Line	31.0
	Wellsite	Throckmorton County Line	29.4
<b>Average</b>	Wellsite	Avg Source	21.9



# Permian Basin – Improved Production



Well H												
Sum of Oil (bbls)	2,057	1,621	1,802	1,634	542	1,599	912	662	649	<b>11,478</b>	↑	101%
Sum of Gas (MCF)	8	28	8,435	11,657	5,532	15,069	10,322	6,377	5,086	<b>62,514</b>	↑	154%
Offset Wells (3)												
Avg of Oil (bbls)	197	656	778	816	590	666	685	649	676	<b>5,714</b>		
Avg of Gas (MCF)	1,010	2,055	2,861	3,183	2,838	2,933	3,332	3,282	3,113	<b>24,607</b>		

# H2prO™ Water Management Solutions

