



Water and Natural Resources Committee
Third Meeting, Ruidoso, NM, September 5, 2019
Produced Water and Water Midstream

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NGL Company Overview

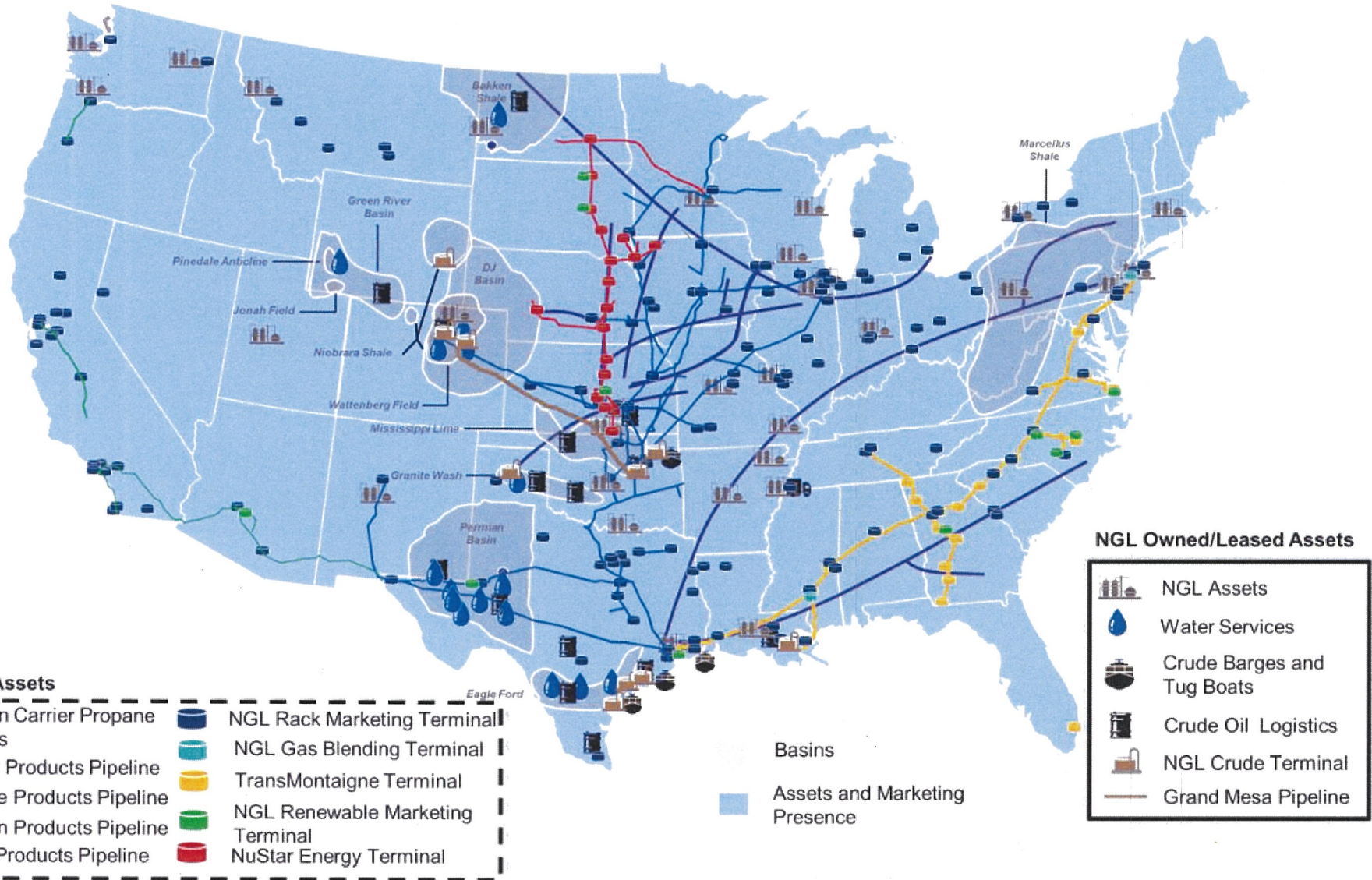
- **NGL Energy Partners LP (“NGL”) is a publicly traded, diversified midstream MLP that provides services to producers and end-users:**
 - Transportation, storage, blending and marketing of ~750,000 BPD of crude oil, NGLs, refined products and renewable fuels
 - ~3,200,000 BPD of total water disposal capacity
- **We are a vertically integrated full-service provider spanning multiple commodities:**
 - **Water** – produced and flowback water from wellhead to disposal plus recycle and discharge capabilities
 - Growing fleet of assets: 134 injection wells; hundreds of miles of water pipelines; recycling facilities
 - **Crude Oil** – from wellhead to refinery
 - >550 miles of crude oil pipelines, ~4.9 million barrels of storage and 27 transload stations
 - **Liquids** – from fractionator/refinery to propane, butane and commercial end-users
 - 21 terminals and ~6.1 million barrels of butane and propane storage capacity
 - **Refined Products & Renewable Fuels** – from refinery to pipeline and terminals to wholesalers/retailers via our presence at over 200 U.S. terminals spanning 33 states
 - ~9.9 million barrels of storage capacity

FORTUNE
500

Fortune Rankings

- ❑ **#179 in 2018 Fortune 500**
 - Revenues = \$17.2 billion
 - Assets = \$6.1 billion
- ❑ **#3 World's Most Admired Companies**
– Diversified Wholesalers 2016

NGL's Geographic Diversification



Selected NGL Initiatives

Water Recycling & Reuse

- **NGL's Anticline Facility has recycled or treated over 62 million barrels since 2006**
 - Multi-patented 14-step water treatment process yields better than drinking quality water
- **NGL operated 2 modular recycling facilities for Noble and Anadarko in the DJ**

Pipeline Transportation

- **NGL disposes over 400,000 BPD of water via pipeline**
 - Current piped water displaces over 3,300 trucks on the road each day
- **NGL has bi-directional pipelines supply produced water on-demand for reuse at the well-site in TX**

Methane Detection

- **Significant investor in a company with a new technology for methane detection**
 - Methane emissions can be pinpointed via proprietary sensors mounted on aircraft
 - Applications for technology include E&P, gas processing, petrochemicals, refining and utilities

Oilfield Solids Processing

- **NGL processes oilfield solids so they do not have to be disposed at a landfill**
- **NGL can process tank bottoms and other solids**
 - ~30% oil can be recovered from the waste products

Renewable Fuels

- **NGL blends and/or markets over 300 million gallons per year of renewable fuels across the U.S.**
 - NGL purchases renewable fuels directly from the biorefinery for blending with gasoline and diesel

Other Initiatives

- **NGL is partnering with Colorado and New Mexico research institutions for water technology (NGL donated 10,000 square-foot R&D facility (\$800,000) to Colorado School of Mines in 2019).**
- **NGL leases 1,385 acres to Invenergy for solar farm development on NGL's North Ranch in Lea County and is working with other developers for similar projects**

NGL's Full Service Water Platform

- **NGL is the largest wastewater midstream company in the United States**
 - *Water Solutions team comprised of over 500 qualified professionals*
 - *Cradle to grave produced water management*

Recycling

- recycling and treatment facility with 65,000 BPD total capacity in WY
- Over 62 million barrels of water recycled and treated since 2006
- Bi-directional pipelines for delivery to the SWD and transportation back to the E&P wellsite
- Significant additional development underway in New Mexico

Water Pipelines

- >100 miles of water pipelines owned by NGL plus > 100 miles under development
- >100 miles of water pipelines owned by producers which deliver water to NGL's assets
- Disposing > 400,000 BPD of wastewater via pipelines

Water Disposal

- ~130 completed SWD wells with over 3,000,000 BPD of total permitted capacity spanning:
 - Pinedale Anticline (WY)
 - DJ (CO)
 - Eagle Ford (TX)
 - Midland (TX)
 - Delaware (NM & TX)

NGL's Potable Water Treatment Facility in Orla, TX



NGL's Water Services by Region

Water Disposal⁽¹⁾

Land Assets

Water Supply

Solids Solutions

Water Pipelines

Anticline / Pinedale (WY)

- 1 well plus multiple wells in development with pipelines

- Acquired 2,479 acres north of the Anticline Facility

- 65 KBPD water recycling facility
- Ability to return water for fracking or surface water discharge

- 95% of water piped
- Developing additional pipelines

DJ Basin (CO)

- 28 wells at 14 facilities
- 467 KBPD permitted disposal capacity

- 74% of wells are on owned land with no royalties

- Previously deployed recycling in DJ for a major E&P operator
- Capacity was 20 KBPD
- Installing bidirectional pipeline with reuse capabilities

- Solids processing at C6
- Solids slurry injection at C9

- 34% of water piped
- Developing additional pipelines including a bidirectional system with reuse capabilities

Midland Basin (TX)

- 15 wells at 15 facilities
- 400 KBPD of permitted disposal capacity

- 100% of wells are on owned land with no royalties

- 31% of water piped

Delaware Basin (NM & TX)

- 50 wells at 34 facilities
- 1.37 MMBPD of permitted disposal capacity

- 70% (100% NM) of wells are on NGL fee land
- 123,000 acres of New Mexico ranch land acquired in 2018

- 11.6 MM bbls/year freshwater rights in NM
- 23 MM bbls/year freshwater capacity in TX

- 4 solids slurry injection wells

- 60% of water piped
- > 50 miles completed pipelines plus ~75 miles in development
- LEX
- WEX

Eagle Ford Basin (TX)

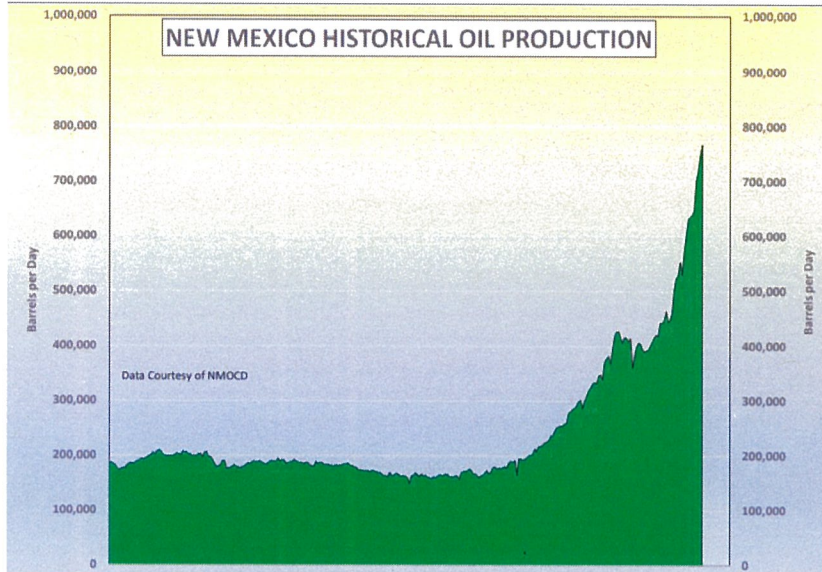
- 37 wells at 25 facilities
- 916 KBPD permitted disposal capacity

- 65% of wells are on owned land with no royalties
- NGL has exclusive development agreement on an East Texas Ranch

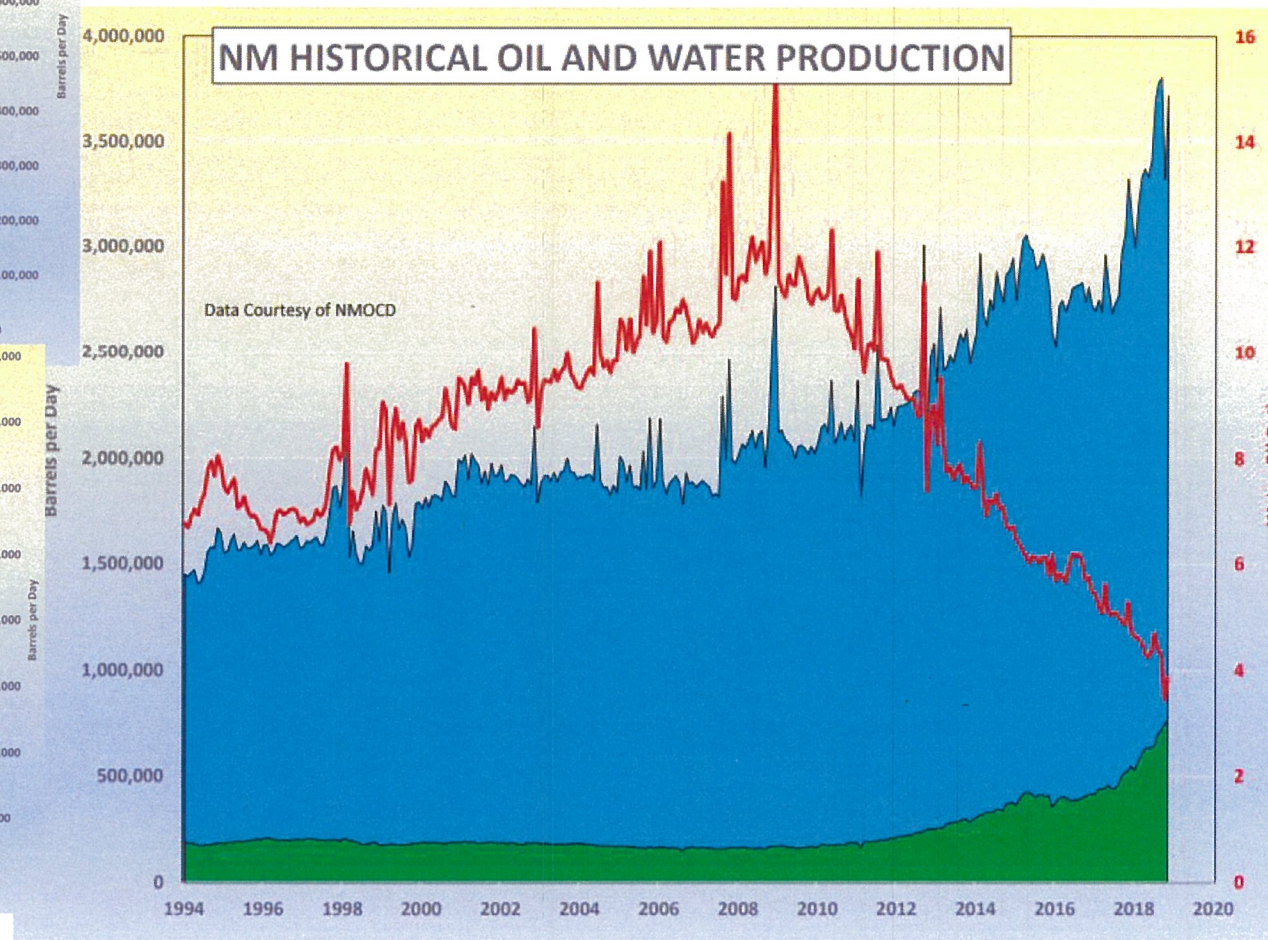
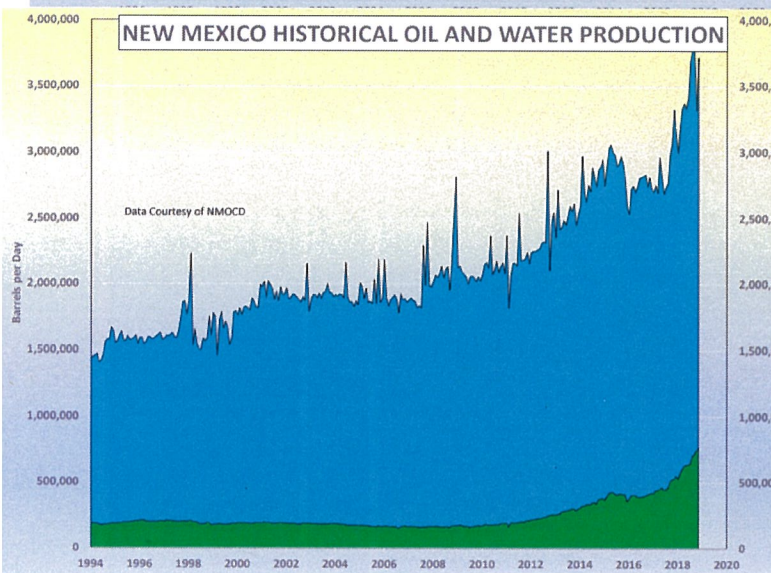
- 4 solids slurry injection wells

- 17% of water piped
- Existing and under construction pipelines

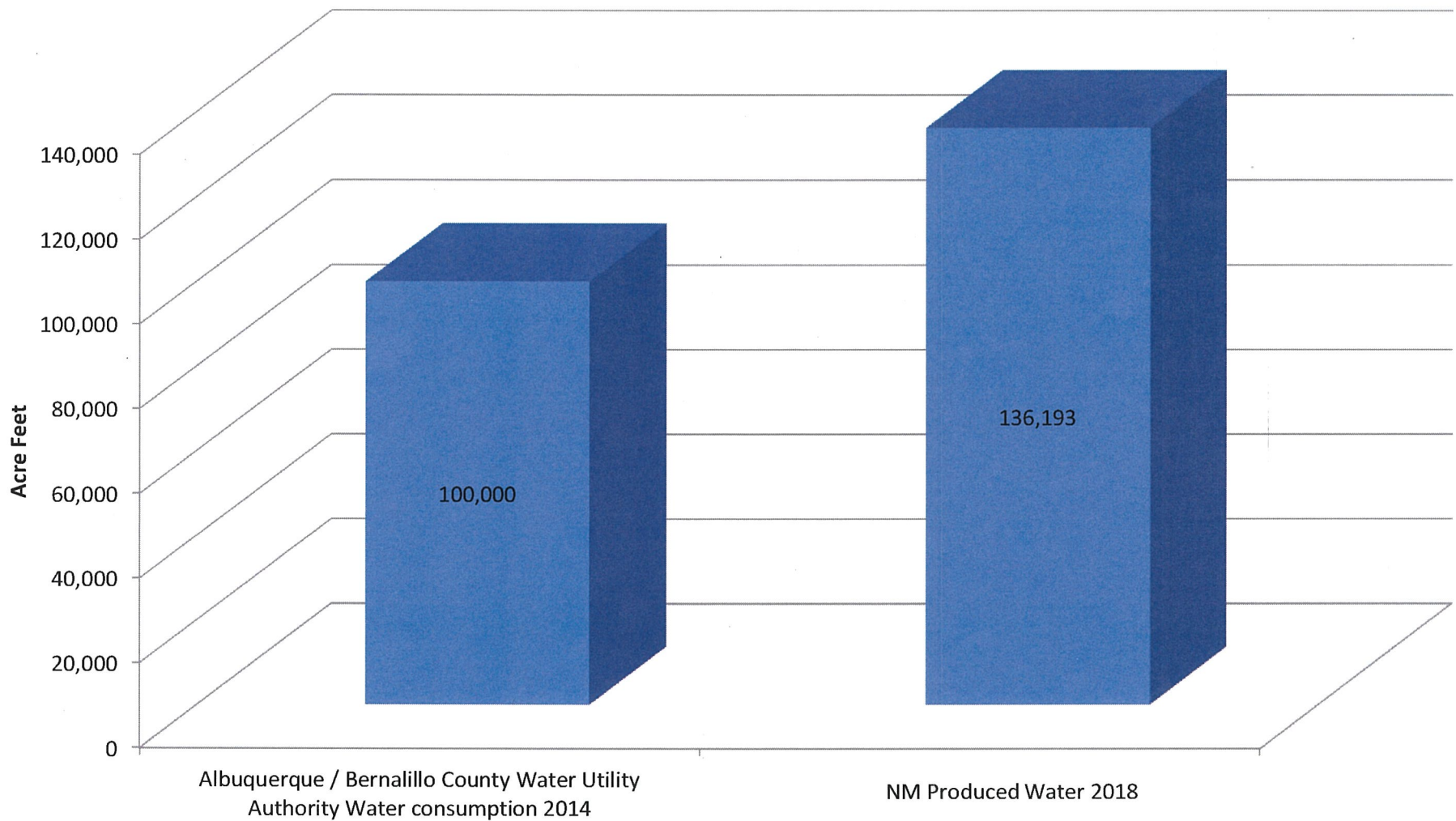
NM O&G and Water Production



NM 2018 Water Oil Ratio (WOR): 4.2 +/-



NM produced water volume in context (acre feet)



Permian / Delaware Production

The Permian (NM & TX)

Hydrocarbon Production

- Oil Production: 6MMBD by 2025

Water Production

- **42,000,000 bbls WATER/ day**
- **15,330,000,000 bbls water / yr.**
- **= 1,997,931 acre feet**

**2,000,000 acre feet produced
water by 2025**

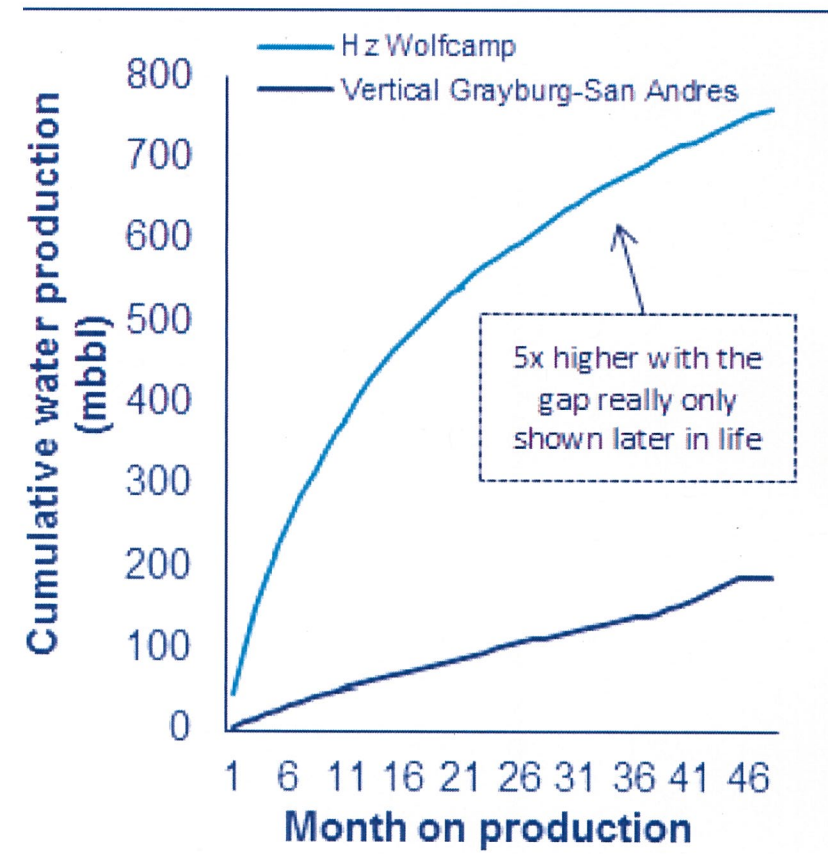
(Elephant Butte capacity 2,065,010)

Permian / Delaware production

Permian produced water: slowly extinguishing a roaring basin?



Wood Mackenzie

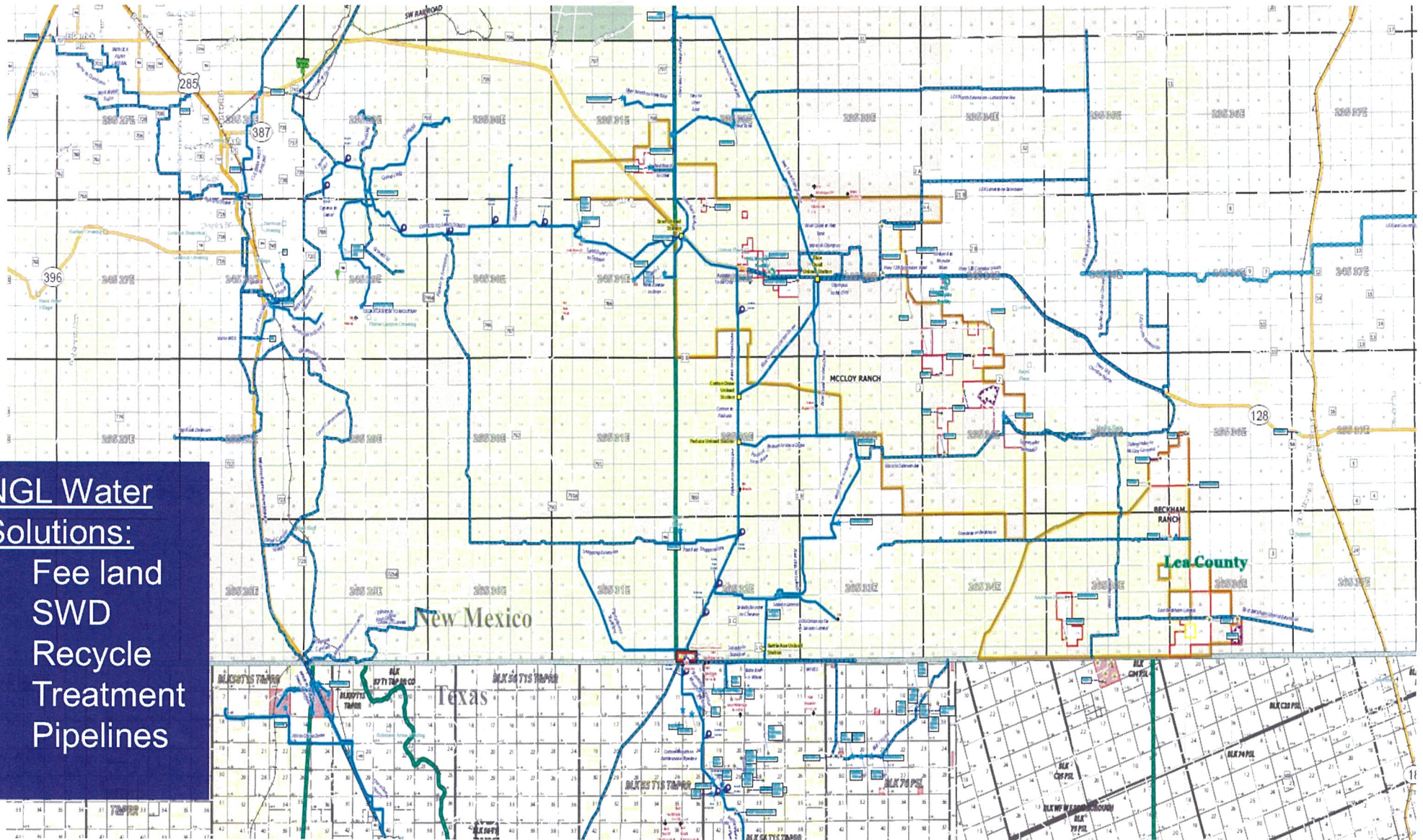


Water-to-oil ratios can easily exceed 7:1, making this one of the highest water cut plays in the Lower 48

“Produced water has created an impending supply risk to the overall Permian region because escalating costs will raise breakevens...”

“Total volume of PW is expected to grow by several million bbls over the next 5 years. The low cost, simple solutions will become exhausted...”

NGL Delaware Basin Footprint



NGL Water Solutions:

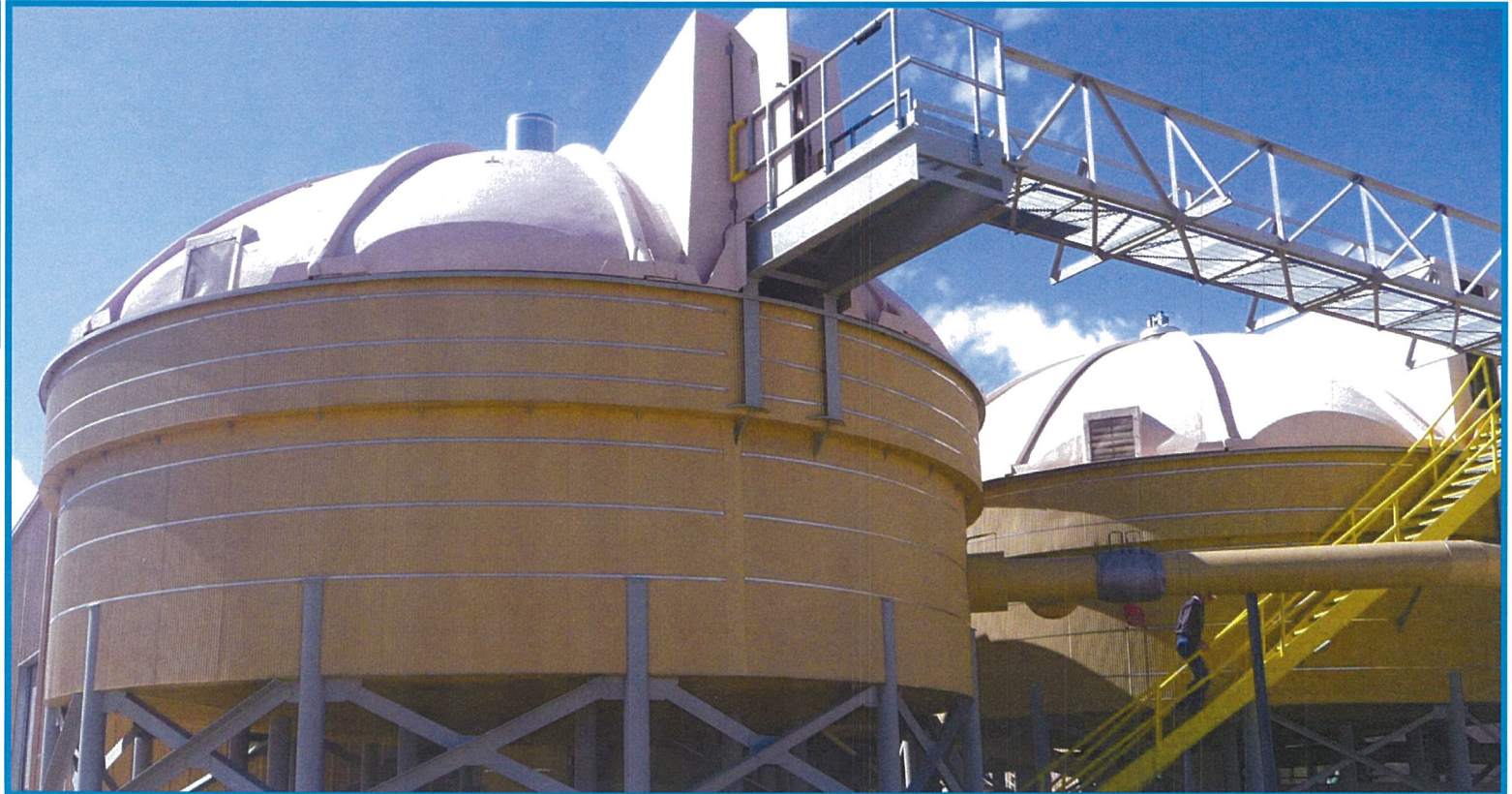
- Fee land
- SWD
- Recycle
- Treatment
- Pipelines

NGL's Anticline Recycling Facility

- NGL's Anticline Recycling Facility is located in Sublette County in Southwest Wyoming
- Single, large scale facility that treats oilfield wastewater generated from drilling and production activities on the Pinedale Anticline and Jonah Field
- 99% of incoming and outgoing water is transported via pipeline
- Can treat to either a recycle standard (for re-use in hydraulic stimulation) or a discharge standard (to a better than drinking water quality primarily for discharge into the New Fork River)
 - Treatment capacity for recycle of 60,000 barrels per day

NGL's Anticline Facility has been recycling since 2008

Over 62 million barrels have been recycled or treated since 2008



Thank You!

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