



# *Sustainable Water Management in the Texas Oil & Gas Industry*

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**ch2m.**<sup>SM</sup>

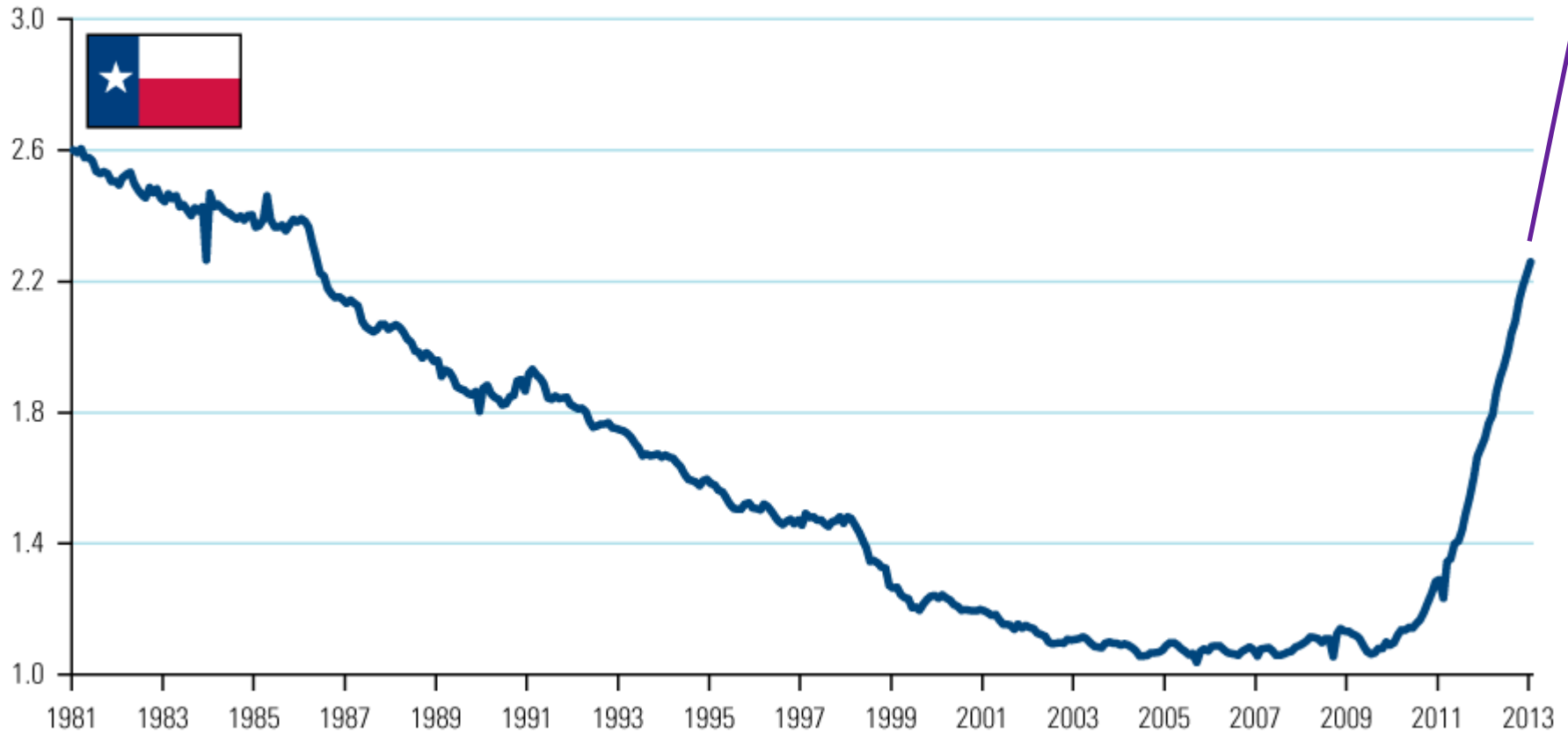




# Texas Oil Industry

## If Texas were a Country, It'd be the World's 13th Largest Oil Producer

Texas Crude Oil Production (Million Barrels per Day)



Source: Bloomberg

# Texas O&G and Water

- O&G water use in Texas will increase to 125,000 acre-feet between 2020 and 2030 (~1 billion barrels/year)
- Currently, 6 billion barrels of produced wastewater is disposed in Texas yearly
- Concerns?



# **2014 White Paper on *Sustainable Water Management in the Texas Oil and Gas Industry***

- Comprehensive, balanced, fact-based report about the industry's water use
- Perspective of other sector's water footprint: agriculture, municipal, recreation, power production...
- Critically examined what Texas industry and government have learned and done well
- Identified areas for improvement
  - reducing the ambiguity and conflicts in some regulation
  - improving public outreach and stakeholder involvement
  - assuring the public over recycling environmental concerns,
  - dealing with liability barriers

# ***2014 White Paper on Sustainable Water Management in the Texas Oil and Gas Industry***

## Recommendations:

- 1) Voluntary Water Recycling Reporting
- 2) Consider Recycling Tax Incentives
- 3) Preserve RCRA Exemption
- 4) Review of NPDES discharge permit requirements impact
- 5) Evaluate Permit by Rule Model for Other States
- 6) Liability Review
- 7) Advocate for Recycling
- 8) Balanced Regulation of Energy Industry's Water Use
- 9) Expand O&G Cleanup Funds to Recycling Activities

# 2016 Update Planned: *Sustainable Water Management in the Texas Oil and Gas Industry*

## Objectives

- Evaluate the impact of the downturn on water management
- Explore best regulatory model for addressing induced seismicity to avoid costly and unnecessary civil lawsuits
- Evaluate alternative policy options to reduce public and company risks to achieve a progressive approach for produced water management
- Bring a broad range of views into the debate
- Gather the new facts on water
- Find the nexus where technology and a regulatory framework ensure public safety and environmental protection
- Show how brackish water use, disposal and recycling can provide stability for industry



# 2014 vs. 2016

## Changed

- Capital budgets: O&G and support companies
- Induced seismicity is increased and is a potential wedge issue
- Proactive state-based industry efforts will bolster case for oil export and other federal issues

## Remaining

- O&G has a vested interest in best practices and encouraging the state government to supportive policies
- Disposal of produced water still concerns Texas regulators and the public
- Barriers remain to reduce fresh water use by sourcing brackish water

# 2016 Research Team

- John Tintera\* – Previous Director of RRC
- Blythe Lyons – Previously with Atlantic Council
- Michael Dunkel\* - CH2MHill
- Charles Warner\*, retired principal of the Atoka Company,
- Technical reviewer\*
- Research Partnership for Secure Energy America (RPSEA) - will serve as project's umbrella organization - contributions tax exempt

\*Time donated to project

# 2016 Scope and Process

- Develop an interview template
- Interviews of broad range of stakeholders, including regulators, industry, NGO environmental organizations
- Independent research
- Share summaries with interviewees for comments
- Submit draft white paper to project sponsors
- Technical expert(s) to review white paper
- Funding commitments: Texas Water Recycling Association, Tintera Energy, Fountain Quail, and Mission West
- Discussions ongoing with foundations, environmental groups and other organizations

# Why???

- O&G and water are critical to Texas
- To constructively influence regulations and best practices





Thank You

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