

MEETING MINUTES

MEETING: TWDB Mining Water Use Study Kick-off Meeting
RECORDED BY: Emma Jones (TWDB)
DATE: December 18, 2020
LOCATION: Microsoft Teams
ATTENDEES: TWDB staff, UTBEG staff, and various stakeholders.

AGENDA ITEM	DISCUSSION
1.	Katie Dahlberg (Data Analyst/Team Lead at TWDB and Contract Manager) welcomed attendees to the meeting and provided introductory remarks.
2.	Temple McKinnon (Director of Water Use, Projections, & Planning (WUPP)) discussed purpose and background of study. <ul style="list-style-type: none"> • FY2020 USGS grant to update 2011 study from UTBEG. • Study will be a comprehensive and quantitative assessment of mining water use and mining sources in Texas (oil and gas, aggregates, coal, and lignite) • Data will be utilized for water demand estimates and projections for 2027 State Water Plan (SWP). • Dependent on stakeholder involvement.
3.	Katie described organization and general duties of WUPP department. Comprised of three sections: <ul style="list-style-type: none"> • Regional Water Planning- Coordinates and assist in the development of Regional Water Plans (RWP). • Water Use and Planning Data - Conducts the annual water use survey, with over 7,000 water users, and manages RWP database and water service boundary viewer. • Economic & Demographic Analysis- Develops annual non-surveyed water estimates, annual utility population estimates, projections for population, and municipal and non-municipal water demands. Also develops the socio-economic analysis for the RWP/SWP.
4.	Bridget Scanlon (UTBEG) presented on tasks and methodology of study. Introduced research staff - Robert (Bob) Reedy, JP Nicot, Qian Yang. Tasks: <ol style="list-style-type: none"> 1. Quantify current and historical water use for hydraulic fracturing and produced water volumes. <ol style="list-style-type: none"> a. Data sources: Frac Focus and IHS b. Historical: 2009 – 2020 c. Depth and lateral length, use per length of lateral d. Collect data from operators, TXOGA, Groundwater Protection Committee e. Produced water volumes from both conventional and unconventional reservoirs f. Saltwater disposal well injection volumes 2. Identify sources of water for hydraulic fracturing. <ol style="list-style-type: none"> a. Data sources: Texas Department of Licensing and Regulation (TDLR) – rig, frack supply, industrial b. Connect well depths to Groundwater Availability Models and Aquifers c. Determine aquifer water quality: fresh or brackish 3. Develop projections of future water demand for hydraulic fracturing for oil and gas (2030-2080). <ol style="list-style-type: none"> a. Historical well spacing will be used in projections

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	<ul style="list-style-type: none"> b. Total amount of water, water use intensity c. Permian, Barnett, Eagle Ford, and Haynesville d. One square mile resolution <ol style="list-style-type: none"> 4. Identify locations of operations and quantify current and projected future water use for coal and lignite mining. <ul style="list-style-type: none"> a. Currently six active mines in Texas b. Survey major coal companies c. Texas Mining & Reclamation Association d. ERCOT electricity projections to estimate future water use 5. Identify locations of operations and quantify current and projected future water use for aggregates. <ul style="list-style-type: none"> a. Extraction materials, total disturbed areas b. Survey operators, determine use, recycling 6. Collaborate with USGS personnel on water use for the mining category.
5.	<p>Katie spoke on contract timeline.</p> <ul style="list-style-type: none"> • Study will run through August 2022. • TWDB will provide data support. • TWDB will develop interactive dashboard near the end of study to share on website. • UTBEG/TWDB will produce progress reports every six months to share with stakeholders and will continue to have progress meetings.
6.	<p>Time at the end for stakeholder feedback and questions.</p> <ol style="list-style-type: none"> 1. Q: How to determine which specific areas of basins will develop/expand first? <ul style="list-style-type: none"> o A: This question is related to which areas are more profitable or economically recoverable, but this study will focus on technically recoverable areas and therefore, treat all areas equally. The assumption is that all resources can be recovered. 2. Q: The Railroad Commission permits rig supply in some cases, are these also reported to TDLR? <ul style="list-style-type: none"> o A: Will follow-up during study. 3. Q: How to address volatility in oil and gas projections? <ul style="list-style-type: none"> o A: Leverage historical data, use machine learning and data analytics to consider well spacing, stacking, and remaining wells that can be drilled. 4. Q: Are you going to have alternative scenarios of projected growth? <ul style="list-style-type: none"> o A: Will be discussed during the study. Low and high scenarios might be a good idea. 5. Suggestion to create a TXOGA Technical Workgroup by CJ Tredway to provide technical and data support from the industry experts. Bridget (UTBEG) will coordinate with CJ. 6. Q: How will reuse be included in the analysis? <ul style="list-style-type: none"> o A: Calculate water demand to hydraulic fracturing the wells, and estimate a percentage used for reuse, which will then be subtracted from total demand. Though reuse is a difficult number to estimate. Maybe TXOGA working group can provide more insight. 7. Q: Will there be assumptions about local impediments to build infrastructure, such as pipelines? <ul style="list-style-type: none"> o A: Look at current infrastructure. Maybe TXOGA workgroup can provide more insight.

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	<p>8. Q: Will the study attempt to quantify reuse for uses other than for hydraulic fracturing?</p> <ul style="list-style-type: none"> ○ A: This study will attempt to quantify produced water and reuse for water demand, but then it might be able to estimate how much water might be available for other uses. There are other efforts in the State to find beneficial use for reuse, and this requires a much more specific analysis.

ACTION ITEM		
WHAT	WHO	WHEN
1. Provide mining study website address and meeting note	TWDB	December 2021
2. First Progress Report	TWDB/UTBEG	March 2021
3. Next Progress Meeting	TWDB/UTBEG	May/June 2021