

Middle Pecos Groundwater Conservation District
Minutes of January 20, 2016

On this the 20th of January, 2016, a regular board meeting and public hearings were held by the Middle Pecos Groundwater Conservation District in the office located at 405 North Spring Drive, Fort Stockton, Texas, with the following members present, to-wit:

Jerry McGuairt	President, Precinct 1
John Dorris	Vice President, Precinct 3
Janet Groth	Precinct 1
Weldon Blackwelder	Precinct 3
Alvaro Mandujano, Jr.	Precinct 4
Vanessa Cardwell	City of Fort Stockton
Terry Whigham	At Large

Quorum Present.

Board members absent: Ronald Cooper, M. R. Gonzalez, Jeffery McMahon, and Merrell Daggett

Others present: Paul Weatherby, Mike Gershon, Allan Standen, Gail Reeves, Ty Edwards, Harvey Gray, Melissa Mills, Brock Thompson, Ed McCarthy, III., Tommy Ervin, Alan Murphy, Chance Murphy, Chris Alexander, Billy Jackson, Gerald D. Lyda, Gene Lyda, Steve Finch, Jr., Steve Finch (Sr.), Kenneth Heritage, Gil Van Deventer, Don Burns, Raymond Straub, Alex Gonzalez, Stephen Robertson, Rita Childs, Clayton Moss, Brent McGuire, Tim Reed, Michael McCulloch, and Bob Beal/Fort Stockton Pioneer.

PUBLIC HEARING AND BOARD ACTION ON PROPOSED RULES

I Call to order at 10:02 a.m. by President Jerry McGuairt.

II The Middle Pecos Groundwater Conservation District (District) will receive public input at a hearing on proposed amendments to the District's rules intended to (1) implement changes to statutory law enacted in 2015 by the 84th Texas Legislature, which amendments address matters including but not limited to (i) the purpose of the District; (ii) permit renewal procedures; (iii) procedures for permit hearings, including preliminary hearings, hearings referred to the State Office of Administrative Hearings, and uncontested hearings; (iv) Board review and consideration of a Proposal for Decision on a permit hearing; (v) language describing the export of groundwater outside of the District; (vi) procedure and considerations for appealing desired future conditions of the aquifers underlying the District; (vii) the regulation of aquifer storage and recovery; (viii) definitions of terms used in the rules or commonly used during District business; (2) clarify the identity of groundwater formations underlying the District; (3) modify hydrogeological report requirements for permit applications; and (4) edit references to past rules amendments.

Public Comments:

Ed (Eddie) McCarthy, III, representing Fort Stockton Holdings LP: The rule changes proposed conflict each other and conflict the water code. Some rules are very vague and some are discretionary. Written comments were presented to the Board for their consideration.

III Adjourn hearing and consider and/or act on proposed rules

Jerry McGuairt adjourned the hearing at 10:09 a.m.

One additional change was proposed by Ty Edwards, and MPGCD hydrogeologist Allan Standen agreed, to change any reference to the San Andres shall be San Andres Formation (not San Andres Aquifer).

MPGCD lawyer, Mike Gershon, told the Board he agrees with the rule changes.

John Dorris made a motion to adopt the rules as proposed. Vanessa Cardwell seconded the motion. Motion carried unanimously.

PRODUCTION PERMIT HEARING for Kenneth W. McIntyre.²

I Call to order at 10:26 a.m. on Public Hearing on **Production Permit for Kenneth W. McIntyre.**

Party representing application: Kenneth McIntyre.

Protestant to application: None

Public Comment: None

Ty Edwards presented the application to the Board. The application is for 1 well located on T&P RR CO Block 48-9 Section 8 approximately 16 miles North West of Fort Stockton on Hwy 285, in Pecos County, Texas. The purpose of this well system is for Industrial Use and requests 20 acre feet/year from the Pecos Valley and Edwards Trinity Aquifer. He is to report monthly usage. The application is administratively complete.

II Adjourn hearing and consider and/or act on **Production Permit for Kenneth W. McIntyre.**

Vanessa Cardwell made a motion to approve the production permit as presented. Seconded by Alvaro Mandujano, Jr. Motion carried unanimously.

REGULAR BOARD MEETING

- I Call to order regular Board meeting at 10:31 a.m. by President Jerry McGuairt.

- II Comments from public and media:
Gil Van Deventer, Trident Environmental, he asked that an update be given on the status and path forward on San Andres wells.

- III Consider and/or act upon Minutes of December 15, 2015.
Janet Groth made a motion to approve the minutes as presented. Motion seconded by John Dorris. Motion carried unanimously.

- IV Consider and/or act upon Accounts Payable and Treasurer's Report and Line Item Transfers for the Month Ending December 31, 2015.
Vanessa Cardwell made a motion to approve the accounts payable and treasurer's report and line item transfers for the month ending December 31, 2015. Motion seconded by Weldon Blackwelder. Motion carried unanimously.

- V Allan Standen to present Injection Well Study and 3-D Model update.
Allan Standen presented the injection well study and 3-D model update
See Attachment A

- VI Steve Finch, Jr. to present La Escalera Ranch update on the Capitan Reef Complex aquifer monitoring and model results.
Steve Finch, Jr. presented an update on the Capitan Reef Complex aquifer as it pertains to the La Escalera Ranch.

- VII Consider and/or act upon requests for rehearing on the Consolidated-Drilling and Production Permit with Authorization to Export for STW Water Process & Technologies.

No action taken.

- VIII Consider and/or act upon Mileage Rate
John Dorris made a motion to set the standard mileage rate at 0.54 beginning 1-01-2016. Motion seconded by Janet Groth. Motion carried unanimously.

- IX Consider and act upon Depository Contract with Pecos County State Bank
John Dorris made a motion that MPGCD set policy and strategy to invest District funds in Demand Deposit accounts, Certificates of Deposit and other interest-bearing bank accounts at Pecos County State Bank- in compliance with the Public Funds Investment Act for the next 12 months. Motion seconded by Weldon Blackwelder. Motion carried.
- X Progress Reports: Well Registrations, Production Permits, Drilling Permits, Data Loggers, Drought Monitor Map and ongoing Water Quality Analysis.
- Well Registrations: Progress report in notebooks.
 - Drought Monitor Map: The current drought monitor map in their notebooks.
- XI Consider and/or act upon General Manager's Correspondence.
- Email from Ian Jones with Texas Water Development Board, 01-07-2016. The model of the Capitan Reef Complex aquifer is finished. The draft model report should be ready for internal review by late February and released for external review in March. The range of total recharge to the Capitan Reef Complex Aquifer in Pecos County is about 2,000 to 9,000 acre-feet per year. The range of total recharge to the Capitan Reef Complex Aquifer in Brewster County is 8,000 to 31,000 acre-feet per year. The recharge depends on the precipitation for the year.
 - The draft for employee insurance at Pecos County State Bank increased from \$2,246.95 to \$4,246.95 as of January 2016.
 - House Natural Resources Committee Chairman Jim Keffer named a new subcommittee today that is named the "Subcommittee on Private Property Rights in Water" and chaired by State Representative Dewayne Burns from Cleburne.
 - The preliminary 2016 Oil and Gas Prices are: Oil down 29% and Gas down 23%.
 - Bugington Energy: Sport Environmental will be on site January 19, 2016 on the two leases. Starting with the Shearer flowline issue and the work is estimated to take 6-9 business days.
 - A \$1,000 scholarship for a senior and poster contest for younger kids was discussed. The scholarship would be based on groundwater essay contest with an intended effect of benefiting the District and its constituents by increased awareness and education about the District's essential statutory purpose of managing and conserving groundwater and protecting private property rights in groundwater.
- XII Directors' comments.
A concern was voiced about using taxpayer's money for the scholarship, followed up by a comment that we have funds other than tax revenue to allocate for a scholarship.

XIII Consider and/or act upon agenda for next meeting.

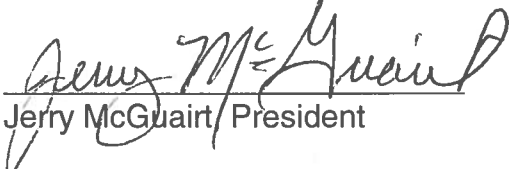
- Next regular meeting will be on Wednesday – February 17, 2016.
- Audit presentation
- Possible update on the San Andres wells
- Possible monitor well in Brewster County.

XIV Adjourn.

Weldon Blackwelder made a motion to adjourn the meeting at 12:04 p.m. Motion seconded by Janet Groth. Motion carried unanimously.



M. R. Gonzalez, Secretary/Treasurer



Jerry McGuair, President

Date Approved 2-17-2016

Allan R. Standen LLC

Letter Report

To: Mr. Paul Weatherby and Ty Edwards

From: Allan Standen LLC

Date: 1/19/2016



Purpose: Interactive 3D Model of Pecos County RRC Injection Wells Report

Allan R. Standen LLC (ARS LLC) received approval from the MPGCD Board in August 2015 to build an interactive 3-D model of Pecos County's RRC water flood and injection wells. The District's assistant manager, Ty Edwards, initially provided (ARS LLC) an RRC generated injection well dataset that included 1,098 wells. Numerous attempts were made by ARS LLC to download RRC injection or water flood well data files and selected batches of forms

- H-1, Application to inject fluid into a productive oil or gas reservoir (water flood well);
- H-5, Disposal/Injection well pressure test report;
- H-10, Annual Disposal/Injection well monitoring report;
- W-14, Application to dispose oil & gas waste by injection into non-productive oil and gas porous formation (produced water injection well)

from the RRC website, but ARS LLC was not successful in this approach.

Approach

Vince Clause of ARS LLC, met with a number of RRC employees and obtained some of the desired well data, he was informed that an official request had to be submitted to the RRC for the remaining injection well/ water flood datasets and batch copy of the forms. An official request was submitted to the RRC around mid-October, 2015. While waiting to receive the data and batches of forms from the RRC, ARS LLC started building the injection well GIS dataset and organizing the forms it had downloaded.

Approximately three weeks later, in early November, the requested information was obtained from the RRC and was merged with the previously compiled data and forms. The injection well GIS dataset was finalized, reviewed for errors and forwarded to Michelle Sutherland LLC to integrate into the existing 3-D hydro-stratigraphic model (LeapFrog software) of Pecos County.

Results

Figure 1 illustrates the location of 2,050 historical injection/water flood wells compiled from the RRC. The status of these wells is summarized below;



Allan R. Standen LLC

- A total of 730 water flood or injection wells have been plugged
- A total of 391 water flood or injection wells had their permit cancelled
- A total of 201 water flood or injection wells have been temporarily abandoned
- A total of 27 water flood or injection wells have been drilled and not completed
- A total of 17 water flood or injection wells have been authorized but have not been drilled yet
- A total of 7 water flood wells have been converted to production wells
- A total of 570 water flood or injection wells are presently active according to the RRC database. Figure 2 illustrates the locations of these 570 active wells; the injection zone of each well is a thick red line.
 - 434 of these are secondary recovery water flood wells
 - 110 of these product zone disposal wells
 - 25 of these are produced water injection wells
 - 1 of these is a brine mining injection well

The injection/water flood GIS shapefile contains many of each well's attributes captured from the H-1, H-5, H-10 and W-14 forms. As part of the project deliverable, hard copies of all available RRC H-1, H-5 and W-14 forms were delivered in 4 large black binders. All of the important data from the H-10 form was captured in the GIS shapefile that was also provided to the District, no hard copies of the H-10 forms were provided to the District.

A 3-D injection/water flood hydro-stratigraphic was provided to the District as part of this deliverable. The Pecos County 3-D model is subdivided into 3 sections to simplify viewing the data and creating cross-sections. The western section includes the Delaware Basin (west of Capitan Reef); the central section follows the trace of the Capitan Reef outline and the eastern section which is dominantly the Midland Basin (east of Capitan Reef) (Figure 1).

Recommendations

While using the Pecos County 3-D hydro-stratigraphic model to determine the geospatial relationship of the injection interval of well to the model's geological formations, it is recommended that the model user turn off or fade all formations within the 3-D model with the exception of the formation or formations of concern or interest.

This 3-D hydro-stratigraphic model is dynamic model and its accuracy is a function of well control and reliable accurate formation picks. This model's accuracy will be constantly improved as more data is compiled and integrated into the model, improving the accuracy of the formation surfaces and contacts between formations.

Any problematic injection well interval that is identified within this 3-D model must be further investigated to confirm the accuracy of existing well data formation surface picks and



Allan R. Standen LLC

interpretations and that the injection interval is correct in the existing 3-D model. It is also recommended that additional supplemental local well data be added into the 3-D model, if available, to improve accuracy.

If there are any questions, please contact me 512-731-6242 or at astanden@att.net.

Allan R. Standen LLC



Allan Standen



Allan R. Standen LLC

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Figure 1

