Middle Pecos Groundwater Conservation District

Minutes of May 20, 2008

On this the 20th day of May, 2008, a Regular Session of the Middle Pecos Groundwater Conservation District, of Pecos County, Texas, met in the Courtroom of the Pecos County Courthouse, Fort Stockton, Texas located at 103 West Callaghan with the following members present, to-wit:

Glenn Honaker	President, Precinct 1
John Dorris	Vice President, Precinct 3
Brad Newton	Secretary/Treasurer, Fort Stockton
Jack McIntyre	Precinct 1
M. R. Gonzalez	Precinct 2
Merrell Daggett	Precinct 2
Lynn Holland	Precinct 3
Alvaro Mandujano, Jr.	Precinct 4
Bart Reid	Precinct 4
S. Evans Turpin	Iraan
Houston McKenzie	At Large

Others Present: Paul Weatherby/General Manager, Melissa Mills/Office Manager, Bob Varmette/Fort Stockton Pioneer, Bill Johnson, Jed Elrod, Alyson McDonald, Weldon Blackwelder, Randy Williams, Michael Thornhill, and Jeff Williams.

Call to Order. The meeting was called to order at 1:08 pm by President Glenn Honaker.

I. Consider and/or act upon minutes of April 15, 2008. Upon review of the minutes, Bart Reid made a motion to approve the minutes which was seconded by Lynn Holland and the motion carried.

Also noted: Mike Thornhill brought a hard copy of the Presentation that he made at the meeting on 4-15-2008.

II. Comments from Public and Media (limit 5 minutes per person). There were no comments from the public at this time.

III. Consider and/or act upon Board of Director for Fort Stockton. Houston McKenzie made a motion to appoint Brad Newton to the unoccupied position for Fort Stockton, followed by a seconded by John Dorris, and the motion unanimously carried.

IV. Consider and/or act upon Oath of Office for Board Members. The following board members recited and signed the Oath of Office and signed the Statement of Elected/Appointed officer: John Dorris, M. R. Gonzalez, Alvaro Mandujano, Jr., Houston McKenzie and Brad Newton.

V. Consider and/or act upon the Account Payable, Treasurer's Report and Line Item Transfers.

M. R. Gonzalez made a motion to approve the account payable, treasurer's report and line item transfers which was seconded by John Dorris. Passed unanimously.

VI. Consider and/or act upon Perdiem Rates for Travel

After discussions about the current rate for meals of $30 and anything over that will require a receipt to be reimbursed – John Dorris made a motion to increase the perdiem rate to $50 per day for meals and require a receipt for amounts above that for reimbursement. The motion was seconded by M. R. Gonzalez and the motion carried unanimously.

VII. Consider and/or act upon MPGCD Board Reorganization.

Office of President: Evans Turpin nominated Glenn Honaker, seconded by John Dorris and Glenn Honaker was elected by acclamation.

Office of Vice President: Merrell Daggett nominated John Dorris, seconded by M. R. Gonzalez and John Dorris was elected by acclamation.

Office of Secretary/Treasurer: Lynn Holland nominated Brad Newton, seconded by Bart Reid and Brad Newton was elected by acclamation.

VIII. Consider and/or act upon Progress Reports, Well Registrations, Production Permits, Drilling Permits, Data Loggers, Water Analysis, and Audit.

Well Registrations: Mr. Weatherby reported small increases in the number of registrations since last month.

Production and Drilling Permits: Fort Stockton High School well is expected to come up at our next meeting as well as a replacement well at Coyanosa, and there have been 3 individuals that have talked about commercial water stations.

Data Loggers: Things are running smoothly in regards to gathering data. Mr. Weatherby showed the graphs that reflected data that has been gathered to date. Mr. Weatherby stated he would like to have a monitor well on the Rustler aquifer, and Mrs. McKenzie was suggested.

The water analysis program is going good.

The Board recessed @ 2:20 pm and reconvened @ 2:52 pm.

At this time, the Charles R. Williams, P. G. (Randy), our hydrologist, presented the board with a presentation titled “Groundwater Modeling 101”.

I. Reasons for Aquifer Modeling
   A. Pumping can affect others and modeling gauges the effects
   B. Unconfined Aquifer – Total & Saturated thickness
   C. Confined Aquifer – Available draw down

II. Draw down
   A. All modeling is based on the idea that the amount of draw down caused by a constant amount of pumping increases over time.
   B. The rate of draw down progression is governed by the Aquifer Hydraulic Parameters

III. Key Aquifer Parameters
   A. Hydraulic Conductivity – the rate at which water moves through aquifer materials
   B. Aquifer Thickness
   C. Transmissivity – a measure of prospective well yield.
   D. Storage Coefficient – fraction of unit volume of aquifer occupied by drainable water.
   E. The effects of multiple wells pumping increase draw down effects.

IV. Groundwater Models
   A. Elaborate number crunchers
   B. A powerful tool to project the effects of alternate groundwater use scenarios
   C. Based in a parallel universe: the model world vs. the real world
   D. No better than the data
   E. Projecting the effects of pumping: 2-D and 3-D
      1. 2-D models require the following data: well location, well construction information and aquifer parameters. The project the local effects of use. 2-D projections can be linked to produce a 3-D results effect to show the draw down projections up to 30 points. It can also account for differing aquifer character at each pumping center.
      2. 3-D models require the following data: Locations of wells, well construction details, aquifer parameters (pumping test data), estimated well use, recharge estimates, aquifer boundaries, features and structure, scenarios to be contrasted to quantify the difference in projected effects.
         a. 3-D Model Terms:
            - Cell – the basic unit of a model, water movement is tracked from cell to cell
            - Time Step – the basic accounting period over which water movement is reconciled
            - Water Budget – the basic accounting spreadsheet of water entering, moving from one point to another and exiting the aquifer
            - Boundary condition – how the model edges interact with the rest of the model; may be “no flow” or supply water to model
            - Transient Model – a model representing historic conditions used for calibrating model parameters
            - Predictive model – a model used to project possible future outcomes from pumping scenarios

- Calibration – the accuracy of the model in reflecting known conditions
- Drain Cell – a type of cell representing spring locations that take water out of the model when water-level elevations are higher that cell elevation.

b. 3-D models may have multiple layers
   - Different geologic units can be ***split*** into multiple model layers
   - Different geologic units can be ***lumped*** into one model layer

c. Multi-Layer models must translate model layers
d. Control data at known locations is needed to establish layer top and bottom elevations
e. 3-D models process a water budget
f. 3-D models use climatic input for recharge. Models can use actual historical data or "average" conditions
g. 3-D models can vary pumping amount and location
h. 3-D models can reflect changes in pumping over time
i. Model output can be aquifer levels for spring flow and may have contour map output and can show ending water-levels or water-level changes

IX. Consider and/or act upon Groundwater District(s) Correspondence.

TAGD meeting was held in San Angelo on April 29 & 30. The good news is there is not any legislation pending concerning groundwater.

Holladay well: There will be a meeting with the Railroad Commission, RCD, County Commissioners and any of our board members that would like to attend on Wednesday, May 21, 2008. The meeting will be held in Imperial.

Audit: Mr. Card has not started out audit.

X. Consider and/or act upon Agenda for next meeting. Fort Stockton High School Drilling/Production permit hearing and the upcoming audit for the year ended 9-30-07.

XI. Adjournment: John Dorris made a motion to adjourn, seconded by Alvaro Mandujano, Jr.. The motion carried, and the meeting adjourned at 3:52 pm.

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Brad Newton, Secretary/Treasurer Glenn Honaker, President

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Date Approved