

PANHANDLE WATER PLANNING GROUP (Modeling Committee)

Minutes

November 19, 2009

A meeting of the Panhandle Water Planning Group (Region A) (Modeling Committee) was held on Friday, November 19, 2009 at 10:00 a.m. in the Board Room of the Panhandle Regional Planning Commission, 415 West Eighth Avenue, Amarillo, Potter County, Texas.

Mr. John Williams, Chairman, presided.

MEMBERS PRESENT:

Janet Guthrie, Hemphill County UWCD; Charles Cooke, TCW Supply, Inc.; Emmett Autrey, City of Amarillo; Gale Henslee, Xcel Energy; C.E. Williams, Panhandle Ground Water Conservation District; John Williams, Canadian River Municipal Water Authority – Ret; Grady Skaggs – County of Oldham; Ben Weinheimer – Texas Cattle Feeder Association; Greg Stanton, USGS; Steve Walthour, NPGCD

OTHERS PRESENT:

Steve Stevens, Mesa Water; Bob Hardin, R.W. Hardin & Assoc.; Marty Jones, Sprouse Law Firm; Mina Johnson, LWV; Joyce Hinsley, LWV; Simone Kiel, Freese & Nichols; Van Kelly, Intera; Spencer Schnier, Freese & Nichols

STAFF PRESENT:

Kyle Ingham, Local Government Services Director; Jonathan Ellis, Local Government Services Program Specialist

1. **CALL TO ORDER**

John Williams called the meeting to order at 10:00 a.m. and took roll call, it was noted that a quorum was present.

2. **CONSIDER – AUGUST 7, 2009 MINUTES**

John Williams asked the members to review the minutes. After review, C.E. Williams made a motion to accept the minutes; Charles Cooke seconded. The motion passed by unanimous assent.

3. **DISCUSS – OGALLALA GROUND WATER AVAILABILITY**

AND

4. **DISCUSS – UPDATE PUMPING – 2010-2060**

AND

5. **DISCUSS – UPDATE OF NORTHERN OGALLALA GAM**

These two items were discussed in tandem.

Simone Kiel suggested letting Van Kelly speak first on some of his work and then she would speak to some of the dispersed memoranda. Ms. Kiel reminded the members of the actions with which Intera and Freese & Nicols were tasked with at the last meeting. Mr. Kelly spoke to his approach and the structure of his simulations which sought to establish regional availability calculations. Additionally he spoke to some strengths and weaknesses of his approach. At the last meeting Intera was tasked with performing three additional simulations: baseline (including updated demands), regional availability (MAG), and available supplies. Mr. Kelly spoke to the purpose, approach, and expected results of each of these simulations. Mr. Kelly indicated that there had been consultation with Texas Water Development Board in developing these simulations. Mr. Kelly described the methodology by which he had estimated flow rates, it was indicated that this had been calculated on a cell-by-cell basis. Mr. Kelly indicated that a complication in estimating flow and volume are the number of dry cells in the models. In response to some of these complications one proposal was to come up with a pumping curve or drawdown curve. Mr. Kelly created such a curve and described its purpose and concept. Mr. Kelly indicated how this new formula seeks to rectify several problems and complications in other models such that the model communicates very well. Bob Hardin asked if this method was characteristic of pumpage among all cells? Does it converge pumpage amounts? Mr. Kelly indicated that generally it assumes that pumpage decreases over time. Kyle Ingham asked if in essence the dependent variable is the flow rate and the independent variable of draw down rate is affected early on how does that affect the flow rate early on and later on? Mr. Kelly said linearly, that the flow rate would be impacted commensurately. Mr. Kelly indicated that there would still be an aberration at the beginning of the curve. Mr. Kelly said that this is because the amount of communication cannot be guessed initially. Steve Walthour asked why Mr. Kelly did not use pumping numbers which were in the Board model. It was determined that in developing his methodology, Mr. Kelly was not seeking to recreate the MAG. Mr. Kelly and Mr. Walthour discussed the impact this type of approach might have and how it relates to conditions in Hemphill County. Mr. Kelly indicated that this simulation achieves the target at every cell. Through discussion it was indicated that this simulation might result in a single remaining volume percentage across all cells which isn't physically possible where as the baseline run gives the other extreme where there are dry cells, Mr. Kelly indicated that the truth is somewhere in between these two theoretical extremes. It was indicated that this methodology was as a result of direction and information from the Board. It was indicated that the Board was interested in this algorithm. Mr. Walthour expressed his belief that not drying up cells is a good one. Mr. Kelly indicated that if this resulted in action which could be implemented at the GCD level that is what is desired. There was discussion on how this technique might fit into the Board's regulatory numbers and the Panhandle Water Planning Group's planning numbers. There was discussion on the accuracy of numbers entered into the algorithm. It was determined that as a district the numbers which resulted from the algorithm and those which were estimated by the districts were very close. It was indicated that the Board model looked at "before and after" not necessarily how it got there. There was extensive discussion over the anomaly at the

beginning of the curve and its scope, placement, and impact specifically its impact in Hemphill and Oldham counties.

John Williams sought to get the presentation back on track and asked Mr. Kelly to proceed. Mr. Kelly moved on to speak of municipal demand and pumping zones. John Williams made the comment that the map only shows areas where there is pumping right now, it does not convey where rights are held and simply waiting to be pumped. Mr. Kelly indicated that if they can get the zones involved it can be factored in. Mr. Kelly spoke to storage across the panhandle. The next slides in the presentation detailed specific strengths and weaknesses of Intera's simulation. Even though there had been extensive discussion on this point these strengths and weaknesses were investigated. There was extensive discussion regarding clarification on several of these presented points.

Mr. Kelly proceeded to speak to model revisions in regard to pumping. Mr. Kelly detailed historical pumping practices, pumping rate data types, pumping rate data sources, and pumping according to various demand including: Irrigation demand, municipal demand, manufacturing demand, mining demand, and livestock demand. Mr. Walthour made the comment that the agriculture demand numbers are very accurate and that the Ag Committee worked very hard to develop those numbers.

Mr. Kelly informed on pumping trends and gave an overall view of the trend as well as a breakdown over the time period of 1950 – 2050. Mr. Kelly proceeded to saturated thickness and baseline simulations water in place measures. Mr. Kelly and Mr. Walthour spoke on how the rates were developed. There was discussion on the contributions from the Dockum towards saturated thickness levels. Mr. Kelly gave an update on his activities since the last meeting specifically regarding coordination with BEG and Dr. Dutton.

Mr. Kelly indicated several points about the new model among them: that the current recharge model is representative of "steady-state" conditions; that the current model is broadly consistent with the BEGs recharge work using CMB method; natural recharge is of minor importance to future resource planning at current development volumes; we will maintain the current model and review the recharge distribution for changes during calibration based upon hydraulic conductivity data; and that return flow has apparently not been included in the 2004 GAM or GAM runs since the 2001 GAM. Mr. Kelly informed on the calibration approach. Mr. Kelly indicated that the model is shown to do fairly well.

Mr. Kelly spoke to the schedule of activities in which he indicated that the pumping updates and updates of the model base are complete. He then spoke to several activities which are being addressed currently including reviewing and updating recharge and properties as well as performing post-audit, recalibration is also ongoing. Mr. Kelly indicated that prediction and reporting look to be completed in December to January. Mr. Kelly concluded by speaking of concerns in proceeding and attempts to keep all parties satisfied with his approach. Mr. Kelly spoke to the hope that all of this will be wrapped up in January.

There was discussion between Ms. Kiel and John Williams on why there were some different estimates between Ms. Kiel's numbers and Mr. Kelly's model. Ms. Kiel provided several explanations regarding the discrepancy.

6. **DISCUSS – SCHEDULE**

Ms. Kiel suggested having one more modeling committee meeting when Mr. Kelly had completed his tasks.

John Williams suggested pairing a modeling committee meeting with the full planning group meeting like today's format. Ms. Kiel and Mr. Ingham suggested having a February and a January meeting. It was suggested that there be a January meeting to finalize suggestions and revisions and a meeting in February to adopt all measures for a final IPP. John Williams suggested planning towards this end.

7. **PUBLIC COMMENT**

There were no public comments

8. **ADJOURN**

C.E. Williams moved to adjourn, Mr. Walthour seconded. Motion passed unanimously. The Modeling Committee meeting was adjourned at 12:30 p.m.