

PANHANDLE WATER PLANNING GROUP

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Memorandum

To: Panhandle Water Planning Group Members
From: Kyle G. Ingham, Local Government Services Director
Date: November 19, 2009
Re: Agenda Item #8

Discuss - Update of Ogallala Aquifer supplies and water needs

At the July 14, 2009 meeting Simone Kiel of Freese and Nichols presented an introduction to how the supplies and demands of the Ogallala Aquifer are being determined for this planning cycle. Based upon input from the PWPG and the Modeling Committee the 2011 chapters that focused on these issues have been revised. This agenda item will include the presentation of information from Simone Kiel followed by a group discussion.

To determine the Ogallala supplies three additional GAM Runs were requested by the Modeling Committee including a Baseline Run, Groundwater Availability, and Currently Available Supply Run. The Executive Committee met on September 22, 2009 to authorize the expenditure of \$12,000 of local funds to conduct these three additional runs that fall outside the scope of the 2011 Regional Planning Contract.

*Attachments: August 7, 2009 Draft Modeling Committee Minutes
September 22, 2009 Draft Executive Committee Minutes
Supplemental Contract for 3 Additional GAM Runs*

*Draft Chapter 3 will be posted to www.panhandlewater.org on or before
November 12, 2009*

PANHANDLE WATER PLANNING GROUP

Minutes

May 15, 2009

A meeting of the Panhandle Water Planning Group (Region A) Modeling Committee) was held on Monday, May 7, 2009 at 10:30 a.m. in the 3rd Floor Conference Room of the Panhandle Regional Planning Commission, 415 West Eighth Avenue, Amarillo, Potter County, Texas.

Mr. John Williams, Chairman, presided.

MEMBERS PRESENT:

Ray Brady, Panhandle Ground Water Conservation District; 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

OTHERS PRESENT:

Steve Stevens, Mesa Water; Bob Hardin, R.W. Hardin & Assoc.; Amy Crowell, Panhandle Ground Water Conservation District; Simone Kiel, Freese & Nichols; Van Kelly, Intera

STAFF PRESENT:

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

1. CALL TO ORDER

John Williams called the meeting to order at 10:30 a.m. and took roll call, it was noted that a quorum was present.

2. DISCUSS AND ACTION AS APPROPRIATE – METHODOLOGY TO ASSESS GROUNDWATER AVAILABILITY FOR OGALLALA AQUIFER FOR 2011 REGIONAL WATER PLAN

John Williams made comment that he had been reviewing the process by which the data in the 2006 Regional Plan was developed, and comparing it to how the DFC and MAG may affect planning for the current round. There was consideration and discussion of the management policy adopted for the 2006 Regional Water Plan, which

required the setting of a goal of withdrawing annually not more than 1.25% of the current saturated thickness of the aquifer, with a recalculation of the remaining saturated thickness every five years. After some discussion on this point, John Williams asked where in the process the DFC from the GMA was. C.E. Williams spoke to the condition of the DFC as being tentatively established but pending a challenge. C.E. Williams made the comment that in regards to resolution of the challenge it might take approximately six months to be resolved. Simone Kiel said she had spoken with TWDB and there would be verification in two weeks how this might affect the PWPG, but it was stated that the DFC wouldn't be guaranteed to go into the MAG while under a challenge. There was discussion between members, it was determined that Mesa Water had issued the challenge to the validity of the DFC, contingent upon the different numbers within one regional planning area, over one aquifer. Steve Walthour spoke to the preparation of the Dockum DFC, he spoke to where in the process the GMA was in regards to the Dockum. Mr. Walthour said currently the GMA was waiting on the Dockum run from the TWDB, and that it should be completed later this year. Mr. Walthour also made the comment that the Rita Blanca was included in the Ogallala DFC. Gale Hensley returned to an issue brought up by John Williams regarding the 2006 Regional Plan methodology. Mr. Hensley spoke to the different considerations when one considered available groundwater and when one considered 1.25% decline. Mr. Hensley suggested that at the end of each 10 year period there is an evaluation of the model and in order to adjust the 1.25% amount. There being no other discussion at this time, Simone Kiel began her presentation.

Ms. Kiel first spoke to the past methods, as used in the 2006 GAM. She also spoke to challenges in the past methodology, among them: how to factor in dry cells, and problems and uncertainty associated with limited well locations. Ms. Kiel also spoke about TWDB methodology which took into consideration the limitations on past practices. Furthermore, Ms. Kiel gave a recommended approach which involved a re-run of the Ogallala availability using the current GAM, this would be done applying pumping at a cell level, and it would involve running 54 one-year simulations. As needed there would be an adjustment to pumping to meet desired conditions. With these practices the hope would be that the availability would equal the final pumping amounts. This would all be done in an effort to deal with issues brought up in discussion of the 2006 Regional Plan methodology. Finally, Ms. Kiel spoke about some decisions she would need from the modeling committee in order to continue moving forward regarding: the criteria for storage remaining, methodology, and implementation. Ms. Kiel also spoke to the schedule of tasks remaining and the timeline involved.

At this point, Bob Harden from R & W Harden and associates, asked to speak. Mr. Harden made the comment that the Region A is setting ground water availability for planning purposes not for managerial purposes. Furthermore he stated that regulatory control of groundwater is limited by groundwater availability and such control cannot conflict with the individual water districts. Mr. Harden urged the group to have the perception in terms of physical amount of water available, not in terms of demand utilized. John Williams asked a question regarding the consideration that Mesa, Amarillo, and CRMWA had all set down what they are needing i.e. demand. Mr. Harden replied that he doesn't want a system which would predict water usage for one group or another. Mr. Williams replied that the purpose of this group is to estimate demand for the future.

John Williams made the comment that if the methodology cannot be agreed up on, perhaps one of the other decisions might be. Emmett Autrey asked the record to express concern about how the DFC is set. Furthermore, Mr. Autrey clarified the issue as such: the DFC being unavailable, the board was unable to use it. Mr. Autrey said, though this be the case, the group must decide what will be used. He further made the point that the group must decide what it thinks the demand would be. Several more questions were asked for clarification. John Williams stated that he would like to see the modeling show the potential results of continuation of current practices, for illustration of the need for conservation. After discussion, Janet Guthrie made the comment that it appeared that three different runs were needed. There was further discussion between members. Amy Crowell began to draft what would be included in each. It was suggested to break for lunch while this happened. C.E. Williams made a motion to have a one hour recess for lunch; Emmett Autrey seconded. Motion passed unanimously. The group recessed at 12:15 p.m.

The group reconvened at 1:20 p.m. The three runs as preliminarily drafted by Amy Crowell are as follows:

- 1) Baseline Run (what would happen if pumping continued at current and projected levels):
 - i. Methodology: Current pumping locations and projected demand at those locations run for 54 years.
 - ii. Results: Gives you physical capability to meet demands regardless of regulation, shows areas of concern.
- 2) Groundwater Availability (like a "firm yield")
 - i. Methodology: Assigned pumping at each cell limited by the planning group goal.
 - ii. Results: Gives you maximum availability at each cell for plan, will be reported per county (and basin). Also receive total water storage in aquifer as volume.
- 3) Currently Available Supplies (Amount of water realistically available to each water user group)
 - i. Methodology: Current and projected pumping at geographic locations, adjusted as needed to meet planning group goal.
 - ii. Results: Available supplies to be used in the needs analysis and water management strategies.

There was discussion over the scopes and purposes of each of the runs. It was determined that through this methodology, the maximum amount can be available for water management strategies. The cost of the three runs was discussed. Charles Cooke made a motion to adopt the methodology presented and conduct the three runs. C.E. Williams seconded. The floor opened up for discussion. Bob Harden spoke about liking the three runs idea. He made the comment that they are segregated and should be. Mr. Harden made the comment that the GMA DFC is not complete and the group should not rely on it for goals of the methodology. Mr. Harden made the comment that should the group rely on the GMA DFC, they should justify it outside of

the fact that it is the GMA DFC, since currently it is not a stable concept due to the challenge. The vote was unanimous in favor of the motion.

The next issue before the group was the determination of goals for the methodology to follow. There were three primary goals discussed: 1) Follow the proposed DFC breakdown. 2) Follow the management plan of each water district. 3) Continue with the previously held 1.25% foot decline rule. Simone Kiel and Van Kelly expressed the importance of setting goals for their work. Steve Walthour spoke of the GMA DFC, he said that the four planning groups (water districts) had agreed upon a proposed DFC. Mr. Walthour asked to make the assumption that the GMA group knows what they are doing in their respective districts. Mr. Walthour proceeded to speak on the 80/50, 50/50, and 40/50 breakdown of the GMA DFC. Gale Henslee expressed his desire to utilize the management goals that the individual districts have as they are set by the managing bodies and are very close to what is in the DFC. Emmett Autrey expressed the view that the districts were here first and they know what they are doing. That being said Mr. Autrey believed that their decision should be respected. John Williams expressed a desire to adopt goals as reasonably similar to the goals that the districts were using. However, it was noted that the management plans of the Districts will be modified to conform to the MAG once the DFC is determined. Ben Weinheimer expressed a favorable view of utilizing the GMA DFC. There was further discussion between C.E. Williams and Steve Walthour on the appropriate way to measure remaining volume. After more discussion, in which the appropriateness of the districts judgment was in managing their own districts, discussion again turned to the adopting of the proposed GMA DFC. In response, C.E. Williams asked what if after the challenge is over those numbers are different. Kyle Ingham made the comment that by utilizing the existing district rules there would be something of a hybrid between what was done in the past and the new GMA DFC. Charles Cooke made a motion to utilize the same goal they had from the last plan which was a 1.25% decline per year, adjusting every five years. C.E. Williams seconded. Janet Guthrie said that would not work for Hemphill, she proceeded to say even a 1% would not fit the goals from the DFC, when the initial run was made it was determined that for the desires of the HCUWD, percentages would not be appropriate which is why the method of measurement was switched to volume remaining. After more discussion, a vote was called for. Ms. Guthrie asked for a roll call vote. In response to a query, Ms. Guthrie made the comment that under the conditions of the motion there would be zero surface water discharges in Hemphill County due to a tributary decrease to the region. Before the vote was taken, Steve Walthour made a comment about the appearance of the GMA DFC and the PWPG adopting different goals and the possibility that actions by the PWPG might negatively affect the GMA proceedings. even though the intent was not as such, the appearance might have such an effect. John Williams conducted a roll call vote for the motion on the table. The vote was as follows:

Aye: Charles Cooke, Gale Henslee, C.E. Williams

Nay: Ben Weinheimer, Janet Guthrie, Grady Skaggs, Steve Walthour, Ray Brady

Abstaining: Emmett Autrey

The final vote being three in favor and five in opposition the motion fails. It was asked what the annual decline percentages were equivalent of the DFC conditions, they were as follows: 1.27% for 50/54, 1.68% for 40/54, and .41% for 80/54. Ms. Guthrie

expressed hesitation at adopting these percentage decline equivalents, due to uncertainty on the will of her board. Steve Walthour made the comment that the legislature created an entity independent of the PWPG to create a regional DFC, not the PWPG. As such Mr. Walthour recommended adopting whatever that group (the GMA) is going to do. Due to the challenge to the proposed DFC and the time constraints that this organization is subject to, Steve Walthour moved that the PWPG adopt as its goals the same goals of the GMA DFC as it was proposed and adopted by the GMA #1. This motion was seconded by Janet Guthrie. Some members asked for clarification on the DFC, which was given. Steve Walthour offered an amendment to the motion in which the Dockum is treated as it has been treated—as apart of the Ogallala—until the Dockum run is received. When asked what this might do to the process of doing runs, Ms. Kiel replied that the goals adopted today would be what all the subsequent work would be based off of. Ms. Kiel stated that if in that process, the DFC is modified their work would be unaffected, it could be adjusted at the end of the process. Furthermore, Ms. Kiel made the comment that the DFC parallels very closely the individual district plans. There was further discussion on concerns within water districts including measuring by discharge and by pumpage. John Williams called for a vote on the matter. It was unanimous, the motion passed.

3. DISCUSS AND ACTION AS APPROPRIATE – NORTHERN OGALLALA GAM STUDY

It was decided to take a five minute break while Van Kelly's presentation was being set up. Van Kelly from Intera, had prepared a presentation for the Committee. He sought to show the Committee where Intera was in the model revisions, what sort of challenges he faced, how the Committee could help, etc. Mr. Kelly said that the PWPG had identified the following items for potential revision in the revised GAM: Pumping Allocation within the GAM, the Base of the Ogallala, Hydraulic Properties, and Recharge based upon BEG studies in Roberts and Hemphill Counties – Return Flows. Additionally Mr. Kelly spoke about some of the challenges in addressing each issue. Regarding pumping, Mr. Kelly spoke to the issue of it requiring the integration of multiple data sources/types. Discrepancies and information gaps were addressed. Regarding Hydraulic Properties, Mr. Kelly said that information had been received from Panhandle GCD, Hemphill GCD, and Mesa Water; CRMWA was still pending. Mr. Kelly said that data received was consistent with the Dutton map, as such it was recommended to keep the Dutton distribution of hydraulic conductivity model wide and making changes only where warranted by new data. Regarding recharge, Mr. Kelly indicated there had been little progress since the last meeting, and he indicated that Dr. Scanlon is reviewing the recharge approach as compared to the BEG study. Mr. Kelly indicated the implications for changing recharge, among them: that recharge is only important to the steady-state model and would require changes to horizontal hydraulic conductivity to re-calibrate. Additionally that it was largely unimportant to transient model and future availability. Mr. Kelly indicated that the next step would be to meet with BEG and write a short white paper regarding Intera's recommendations and basis for them. Finally, Mr. Kelly went over the proposed schedule which included the following milestones:

- Complete pumping updates (in August)
- Perform post-audit (September)

- Update model base
 - Receive feedback on problem areas (August)
 - Redevelop new base (August)
- Update recharge and properties (August – September)
 - New Scope
 - Dynamic pumping algorithm
 - New processes (groundwater ET)
- Recharge data – (late September – October)
- Precipitation – (November)
- Reporting – (November – December)

When asked about when it would be appropriate to meet again, Mr. Kelly suggested mid September, as far as Intera was concerned.

4. DISCUSS – SCHEDULE

With Intera's milestones and timetable in mind, Simone Kiel spoke to some of the issues of Fosse & Nichols and suggested the end of October as an appropriate meeting time for the Modeling Committee.

5. PUBLIC COMMENT

There were no public comments

6. ADJOURN

Steve Walthour moved to adjourn, Janet seconded. Motion passed unanimously. The Modeling Committee meeting was adjourned at 3:50 pm.

PANHANDLE WATER PLANNING GROUP

Minutes

September 22, 2009

A meeting of the Panhandle Water Planning Group (PWPG) Executive and Scope of Work Committee was held on Tuesday September 22, 2009 at 1:30 a.m. in the PRPC Board Room, 415 West Eighth Avenue, Amarillo, Potter County, Texas.

Mr. C.E. Williams, Chairman, presided.

MEMBERS PRESENT:

David Landis, City of Perryton; Vernon Cook, County of Roberts; C.E. Williams, Panhandle Ground Water Conservation District; John Williams; Steve Walthour, North Plains Groundwater Conservation District

OTHERS PRESENT:

Angela Kennedy, Texas Water Development Board

STAFF PRESENT:

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

1. CALL TO ORDER

C.E. Williams was delayed, David Landis called the meeting to order.

2. DISCUSS AND CONSIDER MODELING COMMITTEE RECOMMENDATIONS TO UTILIZE LOCAL FUNDS OF UP TO \$12,000 TO CONDUCT THREE ADDITIONAL GROUNDWATER RUNS

Kyle Ingham gave a brief summary of the modeling committee meeting and presented their recommendations. John Williams spoke to the purpose of the meeting—to select criteria off of which regional water planning might be based. Mr. Williams spoke to the discussion behind adopting the GMA #1 DFC for that purpose and some of the possible pros and cons of doing so. In the end, the group elected to select the criterion of the GMA #1 DFC. That being said, Mr. Williams spoke to the purpose and need of the three recommended groundwater runs. There was discussion among members and it was made known that these runs would be paid for by local funds—a course which had been approved by the PRPC board contingent upon this body's approval. After further discussion for clarification, John Williams moved that the executive

committee approve this scope of work and associated contract. David Landis seconded; motion passed by unanimous assent. Vernon Cook made comment that it should be emphasized that local funds were to be used for this.

3. **OTHER BUSINESS**

Dr. Nolan Clark presented a report from the Ag Committee. Mr. Clark spoke to some changes that he thought appropriate in the conservation recommendations. There was discussion between C.E. Williams, Steve Walthour, and Dr. Clark on these proposed changes. Kyle Ingham recommended that there might be a need for both the Ag Committee and the Modeling Committee to meet prior to the next full PWPG meeting.

4. **ADJOURN**

C.E. Williams adjourned the meeting at 1:52 p.m.

AGREEMENT FOR PROFESSIONAL SERVICES

STATE OF TEXAS

COUNTY OF TARRANT

This AGREEMENT is entered into by the Panhandle Regional Planning Commission, hereinafter called "CLIENT", and Freese and Nichols, Inc., hereinafter called "FNI". In consideration of the AGREEMENTS herein, the parties agree as follows:

- I. **EMPLOYMENT OF FNI:** In accordance with the terms of this AGREEMENT: CLIENT agrees to employ FNI; FNI agrees to perform professional services in connection with the Project; CLIENT agrees to pay to FNI compensation not to exceed \$12,000. The Project is described as the **Supplemental Runs to the 2011 Panhandle Area Water Plan Update** for the Panhandle Area Water Planning Group (PWPG).
- II. **SCOPE OF SERVICES:** FNI shall render professional services in connection with Project as set forth in Attachment SC - Scope of Services and Responsibilities of CLIENT and Attachment SW – Scope of Work, which are attached to and made a part of this AGREEMENT.
- III. **COMPENSATION:** CLIENT agrees to pay FNI the not-to-exceed fee of \$12,000, for all professional services rendered under this AGREEMENT, in accordance with Attachment A - Prime Agreement, Attachment CO – Compensation, Attachment COT – Fee by Task and Expense and Attachment TC item 10, Terms and Conditions, which are attached hereto and made a part of this AGREEMENT. Funds sourced for this AGREEMENT will come from the Panhandle Water Planning Group Local Funds and not Texas Water Development Board regional water planning funds.
- IV. **TERMS AND CONDITIONS OF AGREEMENT:** The Terms and Conditions of Agreement as set forth as Attachment TC shall govern the relationship between the CLIENT and FNI.

Nothing under this AGREEMENT shall be construed to give any rights or benefits in this AGREEMENT to anyone other than CLIENT and FNI, and all duties and responsibilities undertaken pursuant to this AGREEMENT will be for the sole and exclusive benefit of CLIENT and FNI and not for the benefit of any other party.

This AGREEMENT constitutes the entire AGREEMENT between CLIENT and FNI and supersedes all prior written or oral understandings.

This contract is executed in two counterparts.

IN TESTIMONY HEREOF, they have executed this AGREEMENT, the 28 day of October 2009.

ATTEST:

Rebecca Rusk
Rebecca Rusk

PANHANDLE REGIONAL PLANNING COMMISSION
(CLIENT)

By: [Signature]
Gary Pitner/Executive Director

ATTEST:

[Signature]

FREESE AND NICHOLS, INC.
(FNI)

By: Thomas C. Good
Vice President
Name and Title

SCOPE OF SERVICES AND RESPONSIBILITIES OF CLIENT

ARTICLE I

BASIC SERVICES: FNI, through a subcontract with Intera, Inc., shall produce three groundwater model simulations to supplement the scope of services and responsibilities identified in the Scope of Services for the 2011 Panhandle Regional Water Plan Update (PPC07480):

- A. CLIENT is acting as contracting agency for PWPG. FNI will prepare three supplemental groundwater simulations under the direction of the CLIENT for PWPG.
- B. The Project will be funded by local funds solicited by the Panhandle Water Planning Group.
- C. Budget by task are contained in Attachment COT.
- D. All work performed on this contract is a Supplement to Attachment A, 2011 Regional Plan Update Contract between Panhandle Regional Planning Commission and Freese and Nichols Inc. (PPC07480) and shall be in accordance with the methodologies and deliverables specified in Attachment A.

GENERAL REQUIREMENTS:

- A. Contracts and subcontracts are at the discretion of the Panhandle Water Planning Group, Panhandle Regional Planning Commission, and Freese and Nichols Inc.
- B. Work shall be in accordance with the committed funds noted in the attached scope of work, not to exceed total Project cost of \$12,000.
- C. Written progress reports shall be submitted with payment requests in accordance with Section II, Article III-C of Attachment A.

SCOPE OF SERVICES

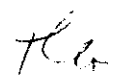
The Scope of Services is included in Attachment SW.

ARTICLE II

TIME OF COMPLETION: FNI agrees to complete the Project by February 28, 2010. FNI is authorized to submit planning costs associated with the development of the three supplemental identified groundwater simulations incurred after August 7, 2009.

Deliverables will be provided insufficient time to be incorporated in the 2011 Regional Water Plan Update after review and approval by the Panhandle Water Planning Group in accordance with the deadlines specified by TWDB.

FNI reserves the right to extend the completion schedule through a contract amendment, with Panhandle Water Planning Group permission, if the TWDB extends the deadlines or there is good cause for the extension and the TWDB grants such extension.

FNI 

OWNER _____

ARTICLE III

RESPONSIBILITIES OF CLIENT: CLIENT shall perform the following in a timely manner so as not to delay the services of FNI:

- A. Designate in writing a person to act as CLIENT's representative with respect to the services to be rendered in this AGREEMENT. Such person shall have contract authority to transmit instructions, receive information, interpret and define CLIENT's policies and decisions with respect to FNI's services for the Project.
- B. Provide all criteria and full information as to CLIENT's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations.
- C. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by FNI, obtain advice of an attorney, insurance counselor and other consultants as CLIENT deems appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of FNI.
- D. Furnish approvals and permits, as appropriate, from all governmental authorities having jurisdiction over the Project and such approvals and consents from others as may be necessary for completion of the Project.
- E. Provide such accounting, independent cost estimating and insurance counseling services as may be required for the Project, such legal services as CLIENT may require or FNI may reasonably request with regard to legal issues pertaining to the Project.
- F. Give prompt written notice to FNI whenever CLIENT observes or otherwise becomes aware of any development that affects the scope or timing of FNI's services.
- G. Bear all costs incident to compliance with the requirements of this Article III.

ARTICLE IV

DESIGNATED REPRESENTATIVES: FNI and CLIENT designate the following representatives:

CLIENT's Designated Representative – Kyle Ingham, 415 West Eighth Avenue, Amarillo, Text 79105; Phone: (806) 372-3381; Fax: (806) 373-3268; E-mail: kingham@theprpc.org

CLIENT's Accounting Representative – Julie Lyles, 415 West Eighth Avenue, Amarillo, Texas 79105; Phone: (806) 372-3381; Fax: (806) 373-3268; E-mail: kingham@theprpc.org

FNI's Project Manager – Simone F. Kiel, 4055 International Plaza, Suite 200, Fort Worth, Texas 76109-4895; Phone: (817) 735-7446; Fax: (817) 735-7491; E-mail: sfk@freese.com

FNI's Accounting Representative – Sharon James, 4055 International Plaza, Suite 200, Fort Worth, Texas 76109-4895; Phone: (817) 735-7298; Fax: (817) 735-7491; E-mail: sdj@freese.com

**COMPENSATION
COST BASED ON HOURLY RATES WITH A MAXIMUM FEE LIMIT OPTION**

- A. **Not to Exceed:** The total fee for Basic Services in Attachments SC and SW shall be computed on the basis of the Schedule of Charges but shall not exceed TWELVE THOUSAND DOLLARS (\$12,000). The fees by task and expense are shown on Attachment COT.
- B. **Schedule of Charges:**

SALARIES

Salaries shall be billed at salary cost with a multiplier of 2.1559.

Salary Cost is defined as the cost of salaries (including sick leave, vacation, and holiday pay applicable thereto) plus unemployment and payroll taxes and contributions for social security, employment compensation insurance, retirement benefits, medical and other insurance, and other miscellaneous benefits.

RATES FOR IN-HOUSE SERVICES**Computer**

\$10.00 per hour

Plotter

Bond	\$ 2.50 per plot
Special	\$ 5.00 per plot
Color	\$ 5.75 per plot

Printing**Black and White**

\$0.10 per copy

Color

\$0.50 per copy

Binding

\$5.75 per book

OTHER DIRECT EXPENSES

Other direct expenses are reimbursed at actual cost. They include outside printing and reproduction expense, communication expense, travel, transportation and subsistence away from Fort Worth and other miscellaneous expenses directly related to the work, including costs of laboratory analysis, tests, and other work required to be done by independent persons other than staff members. For CAD services performed In-house by non-FNI employees where FNI provides workspace and equipment to perform such services, these services will be billed at cost times a multiplier of 2.0. This markup approximates the cost to FNI if an FNI employee was performing the same or similar service.

contract and agrees that that these entities have no liability under the terms of this contract. The Texas Water Development Board is solely a third-party beneficiary under this contract. Any reuse by CLIENT or by those who obtained said documents from CLIENT without written verification or adaptation by FNI will be at CLIENT's sole risk and without liability or legal exposure to FNI, or to FNI's independent associates or consultants, and CLIENT shall indemnify and hold harmless FNI and FNI's independent associates and consultants from all claims, damages, losses and expenses including attorneys' fees arising out of or resulting therefrom. Any such verification or adaptation will entitle FNI to further reasonable compensation. FNI may reuse all drawings, report data and other project information in the execution of the Services provided under this AGREEMENT in FNI's other activities. Any reuse by FNI will be at FNI's sole risk and without liability or legal exposure to CLIENT, and FNI shall indemnify and hold harmless CLIENT from all claims, damages, losses and expenses including attorneys' fees arising out of or resulting therefrom.

9. **OPINION OF PROBABLE COSTS:** If specified in the Scope of Services (Attachment SW), FNI will furnish an opinion of probable project development cost based on present day cost as outlined in Exhibit C of the Prime Agreement, but does not guarantee the accuracy of such estimates. Opinions of probable cost, financial evaluations, feasibility studies, economic analyses of alternate solutions and utilitarian considerations of operations and maintenance costs prepared by FNI hereunder will be made on the basis of FNI's experience and qualifications and represent FNI's judgment as an experienced and qualified design professional. It is recognized, however, that FNI does not have control over the cost of labor, material, equipment or services furnished by others or over market conditions or contractors' methods of determining their prices.
10. **PAYMENT:** Progress payments may be requested by FNI based on the amount of services completed. Payment for the services of FNI shall be due and payable within 14 days of submission of a statement for services to CLIENT up to all available funds provided by the Panhandle Water Planning Group. If sufficient funds are not available, CLIENT shall diligently apply to the Panhandle Water Planning Group for additional funds and submit payment of outstanding amount to FNI within 30 days of receipt of such funds. Statements for services shall not be submitted more frequently than monthly. Any applicable new taxes imposed upon services, expenses, and charges by any governmental body after the execution of this AGREEMENT will be added to FNI's compensation.
11. **AUDITS:** FNI shall submit to audits and investigations by the State Auditor's Office in connection to any and all State funds received pursuant to this contract.
12. **ARBITRATION:** No arbitration arising out of, or relating to, this AGREEMENT involving one party to this AGREEMENT may include the other party to this AGREEMENT without their approval.
13. **SUCCESSORS AND ASSIGNMENTS:** CLIENT and FNI each are hereby bound and the partners, successors, executors, administrators and legal representatives of CLIENT and FNI are hereby bound to the other party to this AGREEMENT and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements and obligations of this AGREEMENT.

Neither CLIENT nor FNI shall assign, sublet or transfer any rights under or interest in (including, but without limitation, moneys that may become due or moneys that are due) this AGREEMENT without the written consent of the other, except to the extent that any assignment, subletting or transfer is mandated by law or the effect of this limitation may be restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this AGREEMENT. Nothing contained in this paragraph shall prevent FNI from employing such independent associates and consultants as FNI may deem appropriate to assist in the performance of services hereunder.

Attachment A

**2011 Regional Plan Update Contract between Panhandle Regional Planning Commission
and Freese and Nichols Inc. (PPC07480)**

SCOPE OF WORK

Supplemental Groundwater Simulations for the 2011 Panhandle Area Regional Water Plan

TASK S:1.1 Baseline: Including Updated Demands

The objective of this task is to assess the impact of the updated projected pumping on groundwater availability in the Panhandle Water Planning Area (PWPA) using the current TWDB Northern Ogallala Groundwater Availability Model (GAM).

This task will include the following:

- Utilize current pumping locations and updated Ogallala demand projections to establish a model simulation with the current GAM depicting the result of projected usage on groundwater availability.

Deliverable: Model simulation depicting capability to meet demands with current infrastructure and no restrictions on pumping.

TASK S:1.2. Regional Availability: Managed Available Groundwater

The focus of this task is to determine available groundwater with the current GAM given revised regional management goals identified by the PWPG. The revised goals are consistent with the Desired Future Conditions adopted by the Groundwater Management Area #1.

This task will include the following:

- Utilizing a similar approach employed by the TWDB to develop the draft Managed Available Groundwater values (Groundwater Availability Run 9-001), assess the theoretical groundwater availability on a county and basin level. To meet the PWPG management goals, perform up to 26 simulations to correct pumping annually at the one-square mile grid.

Deliverable: Model simulation depicting theoretical availability assuming management at the one-square mile level.

TASK S:1.3. Available Supplies Regional

This task estimates groundwater available to specific user groups identified in the 2011 Regional Water Plan based on existing infrastructure and well field locations. This task will focus on irrigation water users and municipal users.

This task will include the following:

- Using the results from Task S:1.2, assess the theoretical groundwater availability for management areas defined by dominant user groups.

Deliverable: Model simulation depicting available supplies to be used in the needs analysis and water management strategies analysis.

Task and Expense Budgets**TASK BUDGET**

TASK	DESCRIPTION	Total Amount
Task S:1.1	Baseline-Current GAM	\$ 3,866
Task S:1.2	Available Supplies – Current GAM	\$ 4,104
Task S:1.3	Available Supplies – Revised GAM	\$ 4,030

EXPENSE BUDGET	
CATEGORY	Total Amount
Salaries & Wages ¹	\$ 0
Fringe ²	\$ 0
Travel	\$ 0
Other Expenses ³	\$ 0
Subcontract Services	\$ 12,000
Overhead ⁵	\$ 0
Profit	\$ 0
TOTAL STUDY COSTS⁶	\$ 12,000

Note: Total study costs are based on a full programmatic allocation.

¹ Salaries and Wages is defined as the cost of salaries of engineers, draftsmen, stenographers, surveyors, clerks, laborers, etc., for time directly chargeable to this contract.

² Fringe is defined as the cost of social security contributions, unemployment, excise, and payroll taxes, employment compensation insurance, retirement benefits, medical and insurance benefits, sick leave, vacation, and holiday pay applicable thereto.

³ Other Expenses is defined to include expendable supplies, communications, reproduction, postage, and costs of public meetings.

⁴ Voting Planning Member Travel Expenses is defined as eligible travel expenses incurred by regional water planning members that cannot be reimbursed by any other entity, political subdivision, etc.

⁵ Overhead is defined as the costs incurred in maintaining a place of business and performing professional services similar to those specified in this contract. These costs shall include the following:

- Indirect salaries, including that portion of the salary of principals and executives that is allocable to general supervision;
- Indirect salary fringe benefits;
- Accounting and legal services related to normal management and business operations;
- Travel costs incurred in the normal course of overall administration of the business;
- Equipment rental;
- Depreciation of furniture, fixtures, equipment, and vehicles;
- Dues, subscriptions, and fees associated with trade, business, technical, and professional organizations;
- Other insurance;
- Rent and utilities; and
- Repairs and maintenance of furniture, fixtures, and equipment.

⁶ Ineligible expenses include, but are not limited to:

- Food and Lodging for Regional Water Planning Group members;
- Tips;
- Purchase of equipment (e.g. computers); and,
- Costs associated with social events and tours.

PANHANDLE WATER PLANNING GROUP

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Memorandum

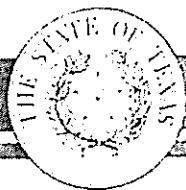
To: Panhandle Water Planning Group Members
From: Kyle G. Ingham, Local Government Services Director
Date: November 19, 2009
Re: Agenda Item #9

Discuss - Water Management Strategies (including agricultural and municipal strategies)

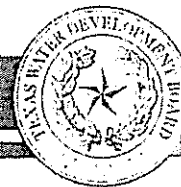
Water management strategies are identified for water users in the region with a projected water shortage. Water management strategies will be developed for agriculture, municipal, or other identified users with needs. Simone Kiel of Freese and Nichols will present the draft recommendations to meet the projected water shortages. This agenda item poses an opportunity for the PWPG to review the updated management strategies and provide recommendations to the engineer regarding future water management strategies.

Attachments: October 28, 2009 TWDB Correspondence

Draft Chapter 4 will be posted to www.panhandlewater.org on or before November 17, 2009



TEXAS WATER DEVELOPMENT BOARD



James E. Herring, *Chairman*
Lewis H. McMahan, *Member*
Edward G. Vaughan, *Member*

J. Kevin Ward
Executive Administrator

Jack Hunt, *Ex. Chairman*
Thomas Weir Labatt III, *Member*
Joe M. Cruicher, *Member*

TO: Regional Water Planning Group Chairs

THROUGH: Carolyn L. Brittin, Deputy Executive Administrator, Water Resources Planning and Information *CLB*
Dan Hardin, Director, Water Resources Planning *DH*

FROM: Matt Nelson, Manager, Regional Water Planning *MN*

DATE: October 28, 2009

SUBJECT: Clarification regarding costs that should be included in the 2011 Regional Water Plans

Background

The current guidance in the Contract Exhibit C *General Guidelines for Regional Water Plan Development (2007-2011)* that is part of the regional water planning grant contracts provides some general guidance regarding the types of infrastructure and costs that should be included in a regional water plan.

In light of increased interest in the newly available State Water Plan funds including:

- Water Infrastructure Fund (WIF¹);
- State Participation Fund (SP²); and
- Economically Distressed Areas Program (EDAP³).

Exhibit C guidance may not be sufficient to adequately guide Regional Water Planning Groups (RWPGs) and their consultants. Some RWPG members and RWPG consultants have requested additional clarifying guidance regarding what types of infrastructure and costs are appropriate to include in the regional water plans.

¹ WIF provides loans for planning, design, and construction. A deferred payment option is available for the planning and design for projects with significant development lead times.

² SP enables the TWDB to assume ownership interest when the local sponsor can't assume the debt for the optimally-sized project at the time of construction.

³ EDAP provides loans and grants for planning, design, and construction to eligible economically distressed areas.

Our Mission

To provide leadership, planning, financial assistance, information, and education for the conservation and responsible development of water for Texas.

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Infrastructure and Costs That May be Included in Regional Water Plans

The water management strategy components that are included in regional water plans should be limited to the infrastructure and costs that are required to develop and convey increased water supplies from water supply sources and to treat the water for end water user group requirements.⁴ This may include treatment facilities at the water user group (WUG) delivery point or treatment facilities at a point prior to transmission to the WUG, for example, at a wholesale water provider location. Costs may also include conservation water management strategies that have associated infrastructure or other costs (e.g. to address water loss, plumbing retrofits) or water management strategies needed to address infrastructure bottlenecks in an existing water supply conveyance system; the removal of which will increase the water supply volume available to a water user group.

The types of facilities and associated capital or other costs that *should* be included in a regional water plan⁵ are directly associated with development of new water sources, 'supplies' resulting from more efficient use of existing supplies (i.e. conservation), or volumetric increases to existing water supplies delivered to WUGs. Such strategies include but are not limited to:

- Facilities associated with a new water supply (e.g. new reservoir, new well field, intakes, pump stations).
- Facilities required to increase water supply from an existing water supply source (e.g. a new water transmission pipeline from an existing reservoir).
- Expansion of existing facilities to accommodate increased supply capacity to treat increased water supply for wholesale providers or water user groups (e.g. water treatment plant capacity expansion).
- Facilities associated with increasing overall water supply yields, for example, by blending new sources of water with existing water sources (e.g. conjunctive use).
- Expanded infrastructure required to fully utilize existing water rights/supplies (e.g. expansion of an undersized raw water intake or expansion of a water treatment plant).
- New facilities required to obtain water from an existing water source that may be changing (e.g. replacement of groundwater wells to obtain water from an existing groundwater supply in an aquifer that is being drawn down below existing wells).
- Infrastructure associated with water (raw or treated) supply transmission lines from wholesale water suppliers to water user groups.

⁴ See General Guidelines for Regional Water Plan Development (2007-2011), 31 TAC §357.7(a)(5). For a summary of the types of capital and operation costs that should be included for each eligible infrastructure component, see General Guidelines for Regional Water Plan Development (2007-2011), Section 4.1.2.

⁵ General Guidelines for Regional Water Plan Development (2007-2011) Planning groups must report capital and O&M costs in the Regional Water Planning Data Web Interface (see the TWDB's "Guidelines for Regional Water Planning Data Deliverables" for further information).

- Water supply storage facilities associated with increasing water supply source yields (e.g. reservoirs, some ASR facilities).
- Costs associated with conservation water management strategies that have capital or other costs. This may include costs of plumbing retrofits or replacement of portions of an existing water transmission or supply distribution network that is the source of major water loss based on significant, measureable water losses. Replacement of such pipelines must provide an immediate, quantifiable increase in water supply.
- Costs associated with the increased wastewater treatment requirements needed to provide additional reuse water supplies.
- Costs of drought management strategies.⁶

Infrastructure and Costs That Should Not be Included in Regional Water Plans

If an infrastructure component is not required to increase the treated water supply volume to a WUG either as new supply or through conservation, the component and its costs should not be included in the regional water plan. Types of items and associated costs that *should not* be incorporated into a regional water plan include but are not limited to:

- New facilities associated with internal distribution networks (e.g. retail distribution within a water user group's system) and that do not convey additional water supply volumes to a WUG.
- Internal distribution facilities associated with reuse water.
- Wastewater collection systems associated with a direct reuse project.
- Water system improvements to address compliance issues related to water quality or water pressure.
- Maintenance of or upgrades to existing equipment or facilities that do not directly increase volumetric water supply (e.g. for improving water treatment processes at existing water treatment plants; replacement of electrical systems; replacement of pumps; or installation of cathodic protection on existing facilities).
- Preventative measures to protect or maintain infrastructure against future water loss.
- Water storage facilities directly associated with retail water distribution networks.

⁶ Estimated costs of probable economic impacts due to drought management strategy implementation may be presented for WMS evaluation and comparison purposes within technical analyses but should not be included in water plans as a financial cost of the plan.

Regional Water Planning Group Chairs
October 28, 2009
Page 4

If you have any questions or comments, please feel free to contact me at (512) 936-3550 or via email at matt.nelson@twdb.state.tx.us. You may also contact Dan Hardin at (512) 936-0880 or via email at dan.hardin@twdb.state.tx.us.

c: Political Subdivisions
Regional Project Managers

Water Infrastructure Fund Loan Program

Texas Water Development Fund

http://www.twdb.state.tx.us/assistance/financial/fin_infrastructure/WIF.asp

Related Links

[Financial Assistance Application Procedure Guidelines](#)

[Program Guidance Manuals, Other Forms and Guidelines](#)

[Tentative Board Meeting Schedule](#)

[Interest rates](#)

[Rules](#)

[Financial Assistance Index](#)

[Frequently Asked Questions](#)

What Is the Water Infrastructure Fund (WIF)?

Financial assistance for the planning, design and construction of State Water Plan projects may be obtained from the Water Infrastructure Fund (WIF). The 80th Texas Legislature (2007) appropriated funding to enable issuance of \$440 million in bonds for WIF to fund water plan projects through the current biennium. This amount is estimated to meet a portion of the water supply needs identified in the 2007 State Water Plan through 2020. Additional funds will be needed to meet the additional water supply needs through the 2060 planning horizon.

Who Can Apply?

To apply for state financial assistance, the applicant must be a political subdivision of the state. Political subdivisions include municipalities, counties, river authorities, special law districts, water improvement districts, water control and improvement districts, irrigation districts, and groundwater districts.

How Can WIF Loans Be Used?

Projects must be recommended water management strategies in the most recent Texas Water Development Board (TWDB) approved regional water plan or approved State Water Plan. Funds may not be used to maintain a system or to develop a retail distribution system.

What Terms Are Offered For Water Plan Funding?

Loans for planning, design, and construction can be funded through the WIF. All loans through the WIF are offered at a subsidized interest rate which is 2 percent below the TWDB's cost of funds. Repayment periods are a maximum of 20 years. Certain loans for development costs have an additional financial opportunity. In order to advance projects which have significant development lead times, a portion of the WIF is available specifically for planning, design, permitting, and other costs associated with state or federal regulatory activities. Utilizing this WIF-Deferred, an applicant may defer all interest and principal payments for up to 10 years, or until the end of construction of the project, whichever is sooner. Interest is not accrued during the deferral period and the loan is amortized over the final 10 years.

How Do I Apply?

Potential applicants are encouraged to meet with TWDB staff for a pre-application conference at which the preparation of the application and the terms of the loan will be discussed. Applications include a preliminary engineering feasibility report and known environmental information, as well as general, fiscal and legal application information.

Applications must be received by the first business day in January or July. Project applications received by those dates will be prioritized relative to all other project applications received for that round of funding. The projects will be prioritized based on whether they meet the priority criteria relative to all other projects being assessed. The tie-breaker will be the projects with the lowest annual median household income based on the most current data available from the U.S. Census Bureau for all of the areas to be served by the project.

What Are the Conditions of the Financial Assistance?

Security Instrument: Bonds from Political Subdivisions.

Pledge: System revenues and/or tax pledges are typically required. Contract revenue pledges for river authorities and others are possible.

Term of Commitment: All loans from the WIF must be closed in their entirety within one year from the date of the commitment.

Length of Loans: 20 years. Bonds may not be prepaid (called) for approximately 10 years (10 year call provisions).

Interest Rates: The interest rate is set in accordance with the TWDB rules in 31 TAC 363.1205. The Board will set a lending rate scale based on its cost of funds and then reduce that rate by 200 basis points for the applicant.

Where Can I Get More Information?

For additional information please contact the Texas Water Development Board, Project Finance and Construction Assistance at (512) 463-0991.

Texas Administrative Code

Next Rule>>

TITLE 31 NATURAL RESOURCES AND CONSERVATION

PART 10 TEXAS WATER DEVELOPMENT BOARD

CHAPTER 363 FINANCIAL ASSISTANCE PROGRAMS

SUBCHAPTER L WATER INFRASTRUCTURE FUND

RULE §363.1206 **Pre-design Funding Option**

(a) This loan application option will provide an eligible applicant that meets all applicable board requirements an alternative to secure a commitment and close a loan for the pre-design, design or building costs associated with funding of a project under §363.1203(b) of this title (relating to Use of Funds). Under this option, a loan may be closed and funds necessary to complete planning and design activities released. If planning requirements have not been satisfied, design and building funds will be held or escrowed and released in the sequence described in this section. Following completion of planning activities and environmental assessment, the executive administrator may require the applicant to make changes in order to proceed with the project. If the portion of a project associated with funds in escrow cannot proceed, the loan recipient shall use the escrowed funds to redeem bonds purchased by the board in inverse order of maturity.

(b) Reservoir projects are not eligible for funding under this option.

(c) The executive administrator may recommend to the board the use of this section if, based on available information, there appear to be no significant permitting, social, environmental, engineering, or financial issues associated with the project. An application for pre-design funding may be considered by the board despite a negative recommendation from the executive administrator.

(d) Applications for pre-design funding must include the following information:

(1) for loans including building cost, a preliminary engineering feasibility report which will include at minimum: a description and purpose of the project; area maps or drawings as necessary to fully locate the project area(s); a proposed project schedule; estimated project costs and budget including sources of funds; current and future populations and projected water needs and sources; alternatives considered; and a discussion of known permitting, social or environmental issues which may affect the alternatives considered and the implementation of the proposed project;

(2) contracts for engineering services;

- (3) evidence that an approved water conservation plan will be adopted prior to the release of loan funds;
- (4) all information required in §363.12 of this title (relating to General, Legal and Fiscal Information); and
- (5) any additional information the executive administrator may request to complete evaluation of the application.
- (e) After board commitment and completion of all closing and release prerequisites as specified in §363.42 of this title (relating to Loan Closing) and §363.43 of this title (relating to Release of Funds), funds will be released in the following sequence:
- (1) for planning and permitting costs, after receipt of executed contracts for the planning or permitting phase;
- (2) for acquisition and design costs, after receipt of executed contracts for the design phase and upon approval of an engineering feasibility report as specified in §363.13 of this title (relating to Engineering Feasibility Data) and compliance with §363.14 of this title (relating to Environmental Assessment); and
- (3) for building costs, after issuance of any applicable permits, and after bid documents are approved and executed construction documents are contingently awarded.
- (f) Board staff will use preliminary environmental data provided by the applicant, as specified in subsection (d) of this section and make a written report to the executive administrator on known or potential significant social or environmental concerns. Subsequently, these projects must have a favorable executive administrator's recommendation which is based upon a full environmental review during planning, as provided under §363.14 of this title.
- (g) The executive administrator will advise the board concerning projects that involve major economic or administrative impacts to the applicant resulting from environmentally related special mitigative or precautionary measures from an environmental assessment under §363.14 of this title.

Source Note: The provisions of this §363.1206 adopted to be effective December 25, 2007, 32 TexReg 9721

PANHANDLE WATER PLANNING GROUP

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Memorandum

To: Panhandle Water Planning Group Members
From: Kyle G. Ingham, Local Government Services Director
Date: November 19, 2009
Re: Agenda Item #10

Discuss - Status report on the Northern Ogallala GAM Update

At the August 7, 2009 Modeling Committee Meeting had an extensive conversation regarding the Northern Ogallala GAM Update. The draft minutes from this meeting outline in detail the discussions regarding this GAM Update under Agenda Item #2 in the Modeling Committee Minutes. Mr. Van Kelley will give an update as to the progress being made on the development of this GAM Update.

Attachments: August 7, 2009 Draft Modeling Committee Minutes

PANHANDLE WATER PLANNING GROUP

Minutes

May 15, 2009

A meeting of the Panhandle Water Planning Group (Region A) Modeling Committee) was held on Monday, May 7, 2009 at 10:30 a.m. in the 3rd Floor Conference Room of the Panhandle Regional Planning Commission, 415 West Eighth Avenue, Amarillo, Potter County, Texas.

Mr. John Williams, Chairman, presided.

MEMBERS PRESENT:

Ray Brady, Panhandle Ground Water Conservation District; 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

OTHERS PRESENT:

Steve Stevens, Mesa Water; Bob Hardin, R.W. Hardin & Assoc.; Amy Crowell, Panhandle Ground Water Conservation District; Simone Kiel, Freese & Nichols; Van Kelly, Intera

STAFF PRESENT:

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

1. CALL TO ORDER

John Williams called the meeting to order at 10:30 a.m. and took roll call, it was noted that a quorum was present.

2. DISCUSS AND ACTION AS APPROPRIATE – METHODOLOGY TO ASSESS GROUNDWATER AVAILABILITY FOR OGALLALA AQUIFER FOR 2011 REGIONAL WATER PLAN

John Williams made comment that he had been reviewing the process by which the data in the 2006 Regional Plan was developed, and comparing it to how the DFC and MAG may affect planning for the current round. There was consideration and discussion of the management policy adopted for the 2006 Regional Water Plan, which

required the setting of a goal of withdrawing annually not more than 1.25% of the current saturated thickness of the aquifer, with a recalculation of the remaining saturated thickness every five years. After some discussion on this point, John Williams asked where in the process the DFC from the GMA was. C.E. Williams spoke to the condition of the DFC as being tentatively established but pending a challenge. C.E. Williams made the comment that in regards to resolution of the challenge it might take approximately six months to be resolved. Simone Kiel said she had spoken with TWDB and there would be verification in two weeks how this might affect the PWPG, but it was stated that the DFC wouldn't be guaranteed to go into the MAG while under a challenge. There was discussion between members, it was determined that Mesa Water had issued the challenge to the validity of the DFC, contingent upon the different numbers within one regional planning area, over one aquifer. Steve Walthour spoke to the preparation of the Dockum DFC, he spoke to where in the process the GMA was in regards to the Dockum. Mr. Walthour said currently the GMA was waiting on the Dockum run from the TWDB, and that it should be completed later this year. Mr. Walthour also made the comment that the Rita Blanca was included in the Ogallala DFC. Gale Hensley returned to an issue brought up by John Williams regarding the 2006 Regional Plan methodology. Mr. Hensley spoke to the different considerations when one considered available groundwater and when one considered 1.25% decline. Mr. Hensley suggested that at the end of each 10 year period there is an evaluation of the model and in order to adjust the 1.25% amount. There being no other discussion at this time, Simone Kiel began her presentation.

Ms. Kiel first spoke to the past methods, as used in the 2006 GAM. She also spoke to challenges in the past methodology, among them: how to factor in dry cells, and problems and uncertainty associated with limited well locations. Ms. Kiel also spoke about TWDB methodology which took into consideration the limitations on past practices. Furthermore, Ms. Kiel gave a recommended approach which involved a re-run of the Ogallala availability using the current GAM, this would be done applying pumping at a cell level, and it would involve running 54 one-year simulations. As needed there would be an adjustment to pumping to meet desired conditions. With these practices the hope would be that the availability would equal the final pumping amounts. This would all be done in an effort to deal with issues brought up in discussion of the 2006 Regional Plan methodology. Finally, Ms. Kiel spoke about some decisions she would need from the modeling committee in order to continue moving forward regarding: the criteria for storage remaining, methodology, and implementation. Ms. Kiel also spoke to the schedule of tasks remaining and the timeline involved.

At this point, Bob Harden from R & W Harden and associates, asked to speak. Mr. Harden made the comment that the Region A is setting ground water availability for planning purposes not for managerial purposes. Furthermore he stated that regulatory control of groundwater is limited by groundwater availability and such control cannot conflict with the individual water districts. Mr. Harden urged the group to have the perception in terms of physical amount of water available, not in terms of demand utilized. John Williams asked a question regarding the consideration that Mesa, Amarillo, and CRMWA had all set down what they are needing i.e. demand. Mr. Harden replied that he doesn't want a system which would predict water usage for one group or another. Mr. Williams replied that the purpose of this group is to estimate demand for the future.

John Williams made the comment that if the methodology cannot be agreed up on, perhaps one of the other decisions might be. Emmett Autrey asked the record to express concern about how the DFC is set. Furthermore, Mr. Autrey clarified the issue as such: the DFC being unavailable, the board was unable to use it. Mr. Autrey said, though this be the case, the group must decide what will be used. He further made the point that the group must decide what it thinks the demand would be. Several more questions were asked for clarification. John Williams stated that he would like to see the modeling show the potential results of continuation of current practices, for illustration of the need for conservation. After discussion, Janet Guthrie made the comment that it appeared that three different runs were needed. There was further discussion between members. Amy Crowell began to draft what would be included in each. It was suggested to break for lunch while this happened. C.E. Williams made a motion to have a one hour recess for lunch; Emmett Autrey seconded. Motion passed unanimously. The group recessed at 12:15 p.m.

The group reconvened at 1:20 p.m. The three runs as preliminarily drafted by Amy Crowell are as follows:

- 1) Baseline Run (what would happen if pumping continued at current and projected levels):
 - i. Methodology: Current pumping locations and projected demand at those locations run for 54 years.
 - ii. Results: Gives you physical capability to meet demands regardless of regulation, shows areas of concern.
- 2) Groundwater Availability (like a "firm yield")
 - i. Methodology: Assigned pumping at each cell limited by the planning group goal.
 - ii. Results: Gives you maximum availability at each cell for plan, will be reported per county (and basin). Also receive total water storage in aquifer as volume.
- 3) Currently Available Supplies (Amount of water realistically available to each water user group)
 - i. Methodology: Current and projected pumping at geographic locations, adjusted as needed to meet planning group goal.
 - ii. Results: Available supplies to be used in the needs analysis and water management strategies.

There was discussion over the scopes and purposes of each of the runs. It was determined that through this methodology, the maximum amount can be available for water management strategies. The cost of the three runs was discussed. Charles Cooke made a motion to adopt the methodology presented and conduct the three runs. C.E. Williams seconded. The floor opened up for discussion. Bob Harden spoke about liking the three runs idea. He made the comment that they are segregated and should be. Mr. Harden made the comment that the GMA DFC is not complete and the group should not rely on it for goals of the methodology. Mr. Harden made the comment that should the group rely on the GMA DFC, they should justify it outside of

the fact that it is the GMA DFC, since currently it is not a stable concept due to the challenge. The vote was unanimous in favor of the motion.

The next issue before the group was the determination of goals for the methodology to follow. There were three primary goals discussed: 1) Follow the proposed DFC breakdown. 2) Follow the management plan of each water district. 3) Continue with the previously held 1.25% foot decline rule. Simone Kiel and Van Kelly expressed the importance of setting goals for their work. Steve Walthour spoke of the GMA DFC, he said that the four planning groups (water districts) had agreed upon a proposed DFC. Mr. Walthour asked to make the assumption that the GMA group knows what they are doing in their respective districts. Mr. Walthour proceeded to speak on the 80/50, 50/50, and 40/50 breakdown of the GMA DFC. Gale Henslee expressed his desire to utilize the management goals that the individual districts have as they are set by the managing bodies and are very close to what is in the DFC. Emmett Autrey expressed the view that the districts were here first and they know what they are doing. That being said Mr. Autrey believed that their decision should be respected. John Williams expressed a desire to adopt goals as reasonably similar to the goals that the districts were using. However, it was noted that the management plans of the Districts will be modified to conform to the MAG once the DFC is determined. Ben Weinheimer expressed a favorable view of utilizing the GMA DFC. There was further discussion between C.E. Williams and Steve Walthour on the appropriate way to measure remaining volume. After more discussion, in which the appropriateness of the districts judgment was in managing their own districts, discussion again turned to the adopting of the proposed GMA DFC. In response, C.E. Williams asked what if after the challenge is over those numbers are different. Kyle Ingham made the comment that by utilizing the existing district rules there would be something of a hybrid between what was done in the past and the new GMA DFC. Charles Cooke made a motion to utilize the same goal they had from the last plan which was a 1.25% decline per year, adjusting every five years. C.E. Williams seconded. Janet Guthrie said that would not work for Hemphill, she proceeded to say even a 1% would not fit the goals from the DFC, when the initial run was made it was determined that for the desires of the HCUWD, percentages would not be appropriate which is why the method of measurement was switched to volume remaining. After more discussion, a vote was called for. Ms. Guthrie asked for a roll call vote. In response to a query, Ms. Guthrie made the comment that under the conditions of the motion there would be zero surface water discharges in Hemphill County due to a tributary decrease to the region. Before the vote was taken, Steve Walthour made a comment about the appearance of the GMA DFC and the PWPG adopting different goals and the possibility that actions by the PWPG might negatively affect the GMA proceedings, even though the intent was not as such, the appearance might have such an effect. John Williams conducted a roll call vote for the motion on the table. The vote was as follows:

Aye: Charles Cooke, Gale Henslee, C.E. Williams

Nay: Ben Weinheimer, Janet Guthrie, Grady Skaggs, Steve Walthour, Ray Brady

Abstaining: Emmett Autrey

The final vote being three in favor and five in opposition, the motion fails. It was asked what the annual decline percentages were equivalent of the DFC conditions, they were as follows: 1.27% for 50/54, 1.68% for 40/54, and .41% for 80/54. Ms. Guthrie

expressed hesitation at adopting these percentage decline equivalents, due to uncertainty on the will of her board. Steve Walthour made the comment that the legislature created an entity independent of the PWPG to create a regional DFC, not the PWPG. As such Mr. Walthour recommended adopting whatever that group (the GMA) is going to do. Due to the challenge to the proposed DFC and the time constraints that this organization is subject to, Steve Walthour moved that the PWPG adopt as its goals the same goals of the GMA DFC as it was proposed and adopted by the GMA #1. This motion was seconded by Janet Guthrie. Some members asked for clarification on the DFC, which was given. Steve Walthour offered an amendment to the motion in which the Dockum is treated as it has been treated—as apart of the Ogallala—until the Dockum run is received. When asked what this might do to the process of doing runs, Ms. Kiel replied that the goals adopted today would be what all the subsequent work would be based off of. Ms. Kiel stated that if in that process, the DFC is modified their work would be unaffected, it could be adjusted at the end of the process. Furthermore, Ms. Kiel made the comment that the DFC parallels very closely the individual district plans. There was further discussion on concerns within water districts including measuring by discharge and by pumpage. John Williams called for a vote on the matter. It was unanimous, the motion passed.

3. **DISCUSS AND ACTION AS APPROPRIATE – NORTHERN OGALLALA GAM STUDY**

It was decided to take a five minute break while Van Kelly's presentation was being set up. Van Kelly from Intera, had prepared a presentation for the Committee. He sought to show the Committee where Intera was in the model revisions, what sort of challenges he faced, how the Committee could help, etc. Mr. Kelly said that the PWPG had identified the following items for potential revision in the revised GAM: Pumping Allocation within the GAM, the Base of the Ogallala, Hydraulic Properties, and Recharge based upon BEG studies in Roberts and Hemphill Counties – Return Flows. Additionally Mr. Kelly spoke about some of the challenges in addressing each issue. Regarding pumping, Mr. Kelly spoke to the issue of it requiring the integration of multiple data sources/types. Discrepancies and information gaps were addressed. Regarding Hydraulic Properties, Mr. Kelly said that information had been received from Panhandle GCD, Hemphill GCD, and Mesa Water; CRMWA was still pending. Mr. Kelly said that data received was consistent with the Dutton map, as such it was recommended to keep the Dutton distribution of hydraulic conductivity model wide and making changes only where warranted by new data. Regarding recharge, Mr. Kelly indicated there had been little progress since the last meeting, and he indicated that Dr. Scanlon is reviewing the recharge approach as compared to the BEG study. Mr. Kelly indicated the implications for changing recharge, among them: that recharge is only important to the steady-state model and would require changes to horizontal hydraulic conductivity to re-calibrate. Additionally that it was largely unimportant to transient model and future availability. Mr. Kelly indicated that the next step would be to meet with BEG and write a short white paper regarding Intera's recommendations and basis for them. Finally, Mr. Kelly went over the proposed schedule which included the following milestones:

- Complete pumping updates (in August)
- Perform post-audit (September)

- Update model base
 - Receive feedback on problem areas (August)
 - Redevelop new base (August)
- Update recharge and properties (August – September)
 - New Scope
 - Dynamic pumping algorithm
 - New processes (groundwater ET)
- Recalibration – (late September – October)
- Prediction – (November)
- Reporting – (November – December)

When asked about when it would be appropriate to meet again, Mr. Kelly suggested mid September, as far as Intera was concerned.

4. **DISCUSS – SCHEDULE**

With Intera's milestones and timetable in mind, Simone Kiel spoke to some of the issues of Freese & Nichols and suggested the end of October as an appropriate meeting time for the Modeling Committee.

5. **PUBLIC COMMENT**

There were no public comments

6. **ADJOURN**

Steve Walthour moved to adjourn, Janet seconded. Motion passed unanimously. The Modeling Committee meeting was adjourned at 3:50 pm.

PANHANDLE WATER PLANNING GROUP

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Memorandum

To: Panhandle Water Planning Group Members
From: Kyle G. Ingham, Local Government Services Director
Date: November 19, 2009
Re: Agenda Item #11

Discuss – Status report on the Lake Meredith study

Freese and Nichols will present a status update regarding the Lake Meredith study component of the 2011 Regional Plan Update

Attachments: None at this time – handout may be issued at the meeting

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Memorandum

To: Panhandle Water Planning Group Members
From: Kyle G. Ingham, Local Government Services Director
Date: November 19, 2009
Re: Agenda Item #12

Discuss - Legislative Recommendations

In both the 2001 and 2006 Regional Water Plans legislative recommendations were identified for the region. Legislative Recommendations are an opportunity for the PWPG to jointly provide legislators with guidance in a written and recorded form. This agenda item poses an opportunity for the PWPG to review the legislative recommendations in previous plans and provide recommendations to the engineer regarding future legislative recommendations to be included in the Initially Prepared 2011 Regional Plan.

Attachments: Legislative recommendations from the 2006 Regional Water Plan

Excerpt from Chapter 8 Legislative Recommendations, 2006 PWPA Plan

8.3 Legislative Recommendations

As the PWPG has gone through the preparation of the regional water supply plan, several items have been identified which the PWPG recommends be considered before the next planning cycle. Title 31 of the Texas Administrative Code (TAC) §357.7(a)(9) states that the Senate Bill One-sponsored regional water plans will include: “regulatory, administrative, or legislative recommendations that the regional water planning group believes are needed and desirable to: facilitate the orderly development, management, and conservation of water resources and preparation for and response to drought conditions in order that sufficient water will be available at a reasonable cost to ensure public health, safety, and welfare; further economic development; and protect the agricultural and natural resources of the state and regional water planning area.” Following is a list of recommendations for the TWDB to consider.

8.3.1 Regulatory Issues

- *Continue to evaluate the rules governing reuse to encourage the use of wastewater effluent.* The current regulatory environment provides a number of barriers to encourage the reuse of wastewater effluent. TCEQ should re-evaluate the current rules and change the rules to provide and quantify incentives for municipalities, industries and agriculture to reuse wastewater effluent.
- *TWDB should modify the criteria used to evaluate the development of irrigation demands.* The PWPG believes that the development of irrigation demand numbers should be performed individually by each planning region using a state-approved methodology.
- *TWDB/TCEQ should evaluate the issue of groundwater rights vs. surface water rights.* The current rules and planning guidelines do not differentiate between handling surface water rights and groundwater rights. A surface water right is a renewable right that can be anticipated to be available every year. A groundwater right may not be necessarily available every year, especially in the case of the Ogallala aquifer which has limited effective annual recharge. The two types of rights also are treated differently under drought of record conditions and in drought management plan recommendations.
- TWDB should submit plans for and results of reservoir feasibility studies to the appropriate Compact Commission (Red River or Canadian River Compact Commission) for review.

8.3.2 Legislative Issues

- *State-sponsored water availability modeling for minor aquifers.* This information is particularly important in the evaluation of the minor aquifers in the Panhandle. There was extremely limited information available regarding supplies which are anticipated to be available from the Dockum, Rita Blanca, and Whitehorse aquifers.
- *Funding for implementation of water supply strategies.* Many water supply strategies, particularly those associated with brush control, water conservation and irrigated agriculture, have limited means of implementation other than public outreach and education. It is recommended that the State sponsor programs to help implement these strategies and that the funding provided be specific to a region.
- *Manage groundwater resources through local groundwater conservation districts.* There remain certain areas of the Panhandle Water Planning Area, as well as other parts of the state, that are not within the boundaries of a groundwater district. In order to create an equal situation with regard to groundwater management, these areas should be included in a local district contained within the regional planning area.
- *Create a water conservation reserve program for irrigated acreage management.* A water conservation reserve program should be created to make it economically feasible for farmers to convert irrigated acreage to dryland.
- *Develop or improve grant and loan programs for utilities to replace/repair aging infrastructure.* Development of a program similar to the TWDB Wastewater Revolving Loan Program to address aging water infrastructure and metering programs.
- *Provide funding for expansion of the High Plains-PET network and integration into a statewide network.* This support should be administered through the network team annually, through groundwater conservation districts within the network area. The State should provide funding to allow enhancement, expansion and/or cost sharing of operating costs of the High Plains-PET network and its integration into a statewide network. This would enable more farms to use the information provided by the network to schedule irrigations, thus using the water more efficiently.
- *Evaluate policy barriers to use playa lakes for conservation purposes.* The State should evaluate the current legislative barriers to using playa lakes. The barriers should be removed or reduced to allow using the playas for aquifer recharge or other beneficial water supply purposes.
- *The PWPG requests that the State should require coordination between Regional Water Planning Groups and all State agencies, for example, regarding the development of the GAM and WAM models to ensure that the two models are not developed independently of or counter to each other.*

8.4 Recommendations for Future State Water Plans

- *TWDB should establish clear guidelines for eligibility for funding and needs assessment for very small cities, unincorporated areas.* Statements to the effect that

those "entities which fall under the planning limits retain eligibility for state funding assistance for water-related projects without having specific individual needs identified in the appropriate Regional Water Plan" would greatly enhance the ability of these small systems to provide their users with a safe and adequate supply of water.

- *TWDB should improve the monitoring and quantification of small communities, county-other, manufacturing, and livestock operator water use to provide better information for planning purposes.*
- *TCEQ should be made at least an ex-officio member of the RWPGs and be required to attend RWPG meetings to provide input on known water quality/quantity problems.*
- *Clarification of the significance of designating unique reservoir sites and stream segments.* It is recommended that the purpose of designating a unique stream segment or reservoir site be defined before the next planning cycle. It is unclear what the implications are of such a designation.
- *Allow development of alternative near-term scenarios for systems that have less than 3,300 population.* Current planning rules require a single scenario be developed for meeting near-term needs. Since future permits must be consistent with the regional plan, a single State-approved scenario may hamper the ability of a community to make its own choice among viable sources of additional water supply.
- *Alternative definitions of the reliable supply from a reservoir.* The current water plan requires the use of firm yield as the definition of water availability in a reservoir. It is recommended that in future water plans the definition of supply from a reservoir match the owner's operational criteria or definition of supply. For example, a reservoir that is used for steam-electric power generation must maintain a minimum pool level in order to effectively dissipate heat. Another example is the case where the water rights of a reservoir are less than the firm yield of the reservoir. In addition, many owners of reservoirs prefer to use the more conservative safe yield as the definition of reliable supply from their reservoirs to allow for more severe droughts than those experienced in the past.
- *Include reservoir sites in future water plans.* The PWPG proposes that the TWDB continue to include potentially feasible surface water supply projects in the Panhandle Water Planning Area, including, but not limited to, the potential Sweetwater Creek Reservoir site and the potential Lelia Lake Creek reservoir site. In addition, proposed flood control/aquifer recharge structures in the Red Deer Creek watershed should be included in future state water plans (PWPG Resolutions passed on February 29, 2000 and March 27, 2000).
- *Clarification of relationship between drought contingency planning and regional water supply planning.* Historically drought contingency planning has not been part of regional water supply planning. It is not clear what role drought contingency planning has in the regional planning process. Also, since one of the goals of drought contingency planning is demand reduction, it is particularly difficult to analyze conservation strategies because conservation is already included in the demand projections.

- *Include an economic impact analysis for the result of implementing water management strategies.* The current planning rules provide for an economic analysis of not meeting water demands. However, there is no provision for economic analysis of implementing a water management strategy. The analysis should include impacts on water suppliers, users and major economic sectors. For example, if irrigated acreage is converted to dryland production, there is no provision for developing an economic impact of implementing that water management strategy. A municipal example would be the effects of water/sewer rates charged to each homeowner if a water management strategy is developed to provide for projected future needs.
- *Salinity and brush control projects for the Canadian River and/or Red River Basin.* Although there have been salinity control projects recently implemented in the Canadian and Red River Basins, future State Water Plans should continue to plan for future salinity control projects and their funding to continue to improve water quality in the basins.
- *Interbasin/Intrabasin water transfers.* Future state water plans should provide for a detailed assessment of the potential for transporting water into the Panhandle Water Planning Area from outside regions as well as the potential for transferring groundwater from counties within the region with potentially developable supplies to counties which are showing significant deficits.
- *Brush control.* TWDB guidance is needed on how to account for brush control projects in the context of a source of "new surface water" for municipal, industrial, agricultural, and other uses. The Canadian River watershed has more than 50% cover of mixed brush species that are amenable to control for rangeland improvement and water enhancement purposes.

PANHANDLE WATER PLANNING GROUP

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Memorandum

To: Panhandle Water Planning Group Members
From: Kyle G. Ingham, Local Government Services Director
Date: November 19, 2009
Re: Agenda Item #13

Discuss and Action as Needed – Approve the water needs for submittal to the TWDB for the socio-economic study.

One of the components of the 2011 Regional Plan Update is the evaluation of the socio-economic impacts of projected water supply shortages. The PWPG can request the TWDB to conduct this study, and the results are included in the Initially Prepared Plan. As required for this planning cycle the water supply shortages must be approved by the PWPG prior to submittal to TWDB for the socio-economic analysis.

Attachments: Draft projected water shortages in the Panhandle Planning Area

Projected Water Shortages in the Panhandle Region
(Values are in Acre-feet per year)

WUG	Basin	County	Projected Water Supply Shortages (Ac-ft/yr)					
			2010	2020	2030	2040	2050	2060
AMARILLO	CANADIAN	POTTER	0	0	576	2,218	3,897	5,309
AMARILLO	RED	POTTER	0	0	410	1,581	2,778	3,784
SPEARMAN	CANADIAN	HANSFORD	0	0	276	611	831	849
SUNRAY	CANADIAN	MOORE	0	0	0	27	108	127
COUNTY-OTHER	CANADIAN	POTTER	0	0	0	299	708	1,043
COUNTY-OTHER	RED	POTTER	0	103	329	586	866	1,096
COUNTY-OTHER	RED	RANDALL	0	5	597	1,273	2,009	2,619
MANUFACTURING	CANADIAN	HUTCHINSON	0	0	664	1,244	1,752	2,450
MANUFACTURING	CANADIAN	MOORE	173	800	1,033	1,396	1,718	2,067
MANUFACTURING	CANADIAN	POTTER	0	0	33	57	35	43
MANUFACTURING	RED	POTTER	0	0	0	602	1,333	2,155
MANUFACTURING	RED	RANDALL	0	0	0	0	0	12
STEAM ELECTRIC POWER	CANADIAN	MOORE	75	99	117	128	136	154
IRRIGATION	CANADIAN	DALLAM	132,889	140,984	148,630	149,134	133,737	117,396
IRRIGATION	CANADIAN	HANSFORD	0	856	1,337	4,402	2,933	1,496
IRRIGATION	CANADIAN	HARTLEY	181,732	180,523	183,457	179,983	161,368	142,079
IRRIGATION	CANADIAN	HUTCHINSON	15,008	12,175	11,652	10,612	7,534	5,455
IRRIGATION	CANADIAN	MOORE	52,317	48,090	52,425	54,994	50,321	45,420
IRRIGATION	CANADIAN	SHERMAN	72,126	68,962	79,286	82,553	76,718	68,790
LIVESTOCK	RED	CHILDRESS	0	70	72	73	75	77
AMARILLO	RED	RANDALL	0	0	762	2,977	5,288	7,268
BORGER	CANADIAN	HUTCHINSON	0	0	188	376	464	526
CACTUS	CANADIAN	MOORE	0	0	204	262	309	354
CANYON	RED	RANDALL	0	0	0	16	388	690
DUMAS	CANADIAN	MOORE	0	387	1,163	1,672	2,219	2,478
GRUVER	CANADIAN	HANSFORD	0	77	229	282	333	334
LEFORS	RED	GRAY	0	0	0	29	35	36
MEMPHIS	RED	HALL	0	81	140	140	140	142
		Total	454,320	453,212	483,580	497,527	458,033	414,249

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Memorandum

To: Panhandle Water Planning Group Members
From: Kyle G. Ingham, Local Government Services Director
Date: November 19, 2009
Re: Agenda Item #15

Report or Comments from TWDB Personnel

Attachments: NA

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Memorandum

To: Panhandle Water Planning Group Members
From: Kyle G. Ingham, Local Government Services Director
Date: November 19, 2009
Re: Agenda Item #16

Other business and closing comments from the Chairman and the Board Members.

Attachments: NA

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Memorandum

To: Panhandle Water Planning Group Members
From: Kyle G. Ingham, Local Government Services Director
Date: November 19, 2009
Re: Agenda Item #17

Public Comment – Relating to PWPG activities

Attachments: None