

**GROUNDWATER
MANAGEMENT
AREA 8**

JOINT PLANNING MEETING

**CLEBURNE CONFERENCE CENTER
1501 W. HENDERSON ST
CLEBURNE, TX 76033**

**TUESDAY
JANUARY 21, 2014
10:00 AM**

AGENDA

NOTICE OF MEETING GROUNDWATER MANAGEMENT AREA 8

Notice is hereby given that the groundwater conservation districts located wholly or partially within Groundwater Management Area (GMA) 8, as designated by the Texas Water Development Board (TWDB), consisting of the Central Texas Groundwater Conservation District, Clearwater Underground Water Conservation District, Fox Crossing Water District, Middle Trinity Groundwater Conservation District, North Texas Groundwater Conservation District, Northern Trinity Groundwater Conservation District, Post Oak Savannah Groundwater Conservation District, Prairielands Groundwater Conservation District, Red River Groundwater Conservation District, Saratoga Underground Water Conservation District, Southern Trinity Groundwater Conservation District, and Upper Trinity Groundwater Conservation District will hold a ***Joint Planning meeting at 10:00 A.M. on Tuesday, January 21, 2014***, at the Cleburne Conference Center located at 1501 W. Henderson St., Cleburne, TX 76033. The meeting will be open to the public. The following items of business will be discussed:

1. Invocation.
2. Call meeting to order and establish quorum.
3. Welcome and introductions.
4. Public comment.
5. Approve minutes of September 24, 2013 GMA 8 meeting.
6. Additional information/clarification on regional draw down concerns presented by MTGCD at the September 24, 2014 GMA8 meeting.
7. Southern Trinity GCD – Conservation Efforts, Scientific Investigations, and Modeling of Aquifer Conditions.
8. Update and possible action on the Northern Trinity/Woodbine Aquifer GAM Overhaul Project and the development of proposed Desired Future Conditions (DFCs).
9. Update and possible action regarding the process for the development of Desired Future Conditions (DFCs) including the consideration and possible approval of consulting services.
10. Receive update on groundwater related legislation and other matters.
11. Set date, time, and place of next meeting and discuss agenda items.
12. Closing comments.
13. Adjourn.

Dated this 7th day of January, 2014

Eddy Daniel, Chair
Groundwater Management Area 8

The above agenda schedules represent an estimate of the order for the indicated items and is subject to change at any time. These public meetings are available to all persons regardless of disability. If you require special assistance to attend the meeting, please call (855) 426-4433 at least 24 hours in advance of the meeting to coordinate any special physical access arrangements.

At any time during the meeting or work session and in compliance with the Texas Open Meetings Act, Chapter 551, Government Code, Vernon's Texas Codes, Annotated, the Groundwater Management Area 8 may meet in executive session on any of the above agenda items or other lawful items for consultation concerning attorney-client matters (§551.071); deliberation regarding real property (§551.072); deliberation regarding prospective gifts (§551.073); personnel matters (§551.074); and deliberation regarding security devices (§551.076). Any subject discussed in executive session may be subject to action during an open meeting.

ATTACHMENT 5

Meeting of the
Groundwater Management Area 8
September 24, 2013 in Cleburne, TX

Minutes

The Groundwater Management Area 8 district representatives (referred to herein collectively as “the Committee” for easy reference), which consists of representatives from the Central Texas Groundwater Conservation District, Clearwater Underground Water Conservation District, Fox Crossing Water District, Middle Trinity Groundwater Conservation District, North Texas Groundwater Conservation District, Northern Trinity Groundwater Conservation District, Post Oak Savannah Groundwater Conservation District, Prairielands Groundwater Conservation District, Red River Groundwater Conservation District, Saratoga Underground Water Conservation District, Southern Trinity Groundwater Conservation District, and Upper Trinity Groundwater Conservation District (GCD), held a *Joint Planning meeting at 10:00 A.M. on Tuesday, September 24, 2013*, in the Cleburne Conference Center in Cleburne, Texas.

Groundwater District Representatives Present:

Central Texas GCD: Charles Shell
Clearwater UWCD: Judy Parker
Fox Crossing WD: None
Middle Trinity GCD: Joe Cooper
North Texas GCD: Eddy Daniel
Northern Trinity GCD: Craig Schkade

Post Oak Savannah GCD: Gary Westbrook
Prairielands GCD: Charles Beseda
Red River GCD: David Gattis
Saratoga UWCD: Jason Jones
Southern Trinity GCD: Scooter Radcliff
Upper Trinity GCD: Mike Massey

1. Invocation

Eddy Daniel, North Texas GCD presided over the meeting and Gary Westbrook, Post Oak Savannah GCD provided the invocation.

2. Call meeting to order and establish quorum.

The Groundwater Management Area 8 (GMA 8) meeting was called to order at 10:05 AM at the Cleburne Conference Center in Cleburne, TX. Mr. Daniel welcomed the new members, took roll and established that a quorum was present. 11 Districts were present at the time of roll call, with Fox Crossing WD absent.

3. Welcome and introductions.

Mr. Daniel asked members of the Committee to introduce themselves. Mr. Daniel noted that the Fox Crossing WD has internally dissolved, but the State has not approved the dissolution. As such, the agenda must still be posted in their name and at the Mills County Courthouse. Mr. Daniel thanked Joe Cooper from Middle Trinity GCD for his generosity in posting the agenda for Fox Crossing WD in their absence.

4. Public Comments.

No public comments were received.

5. Approve minutes of February 29, 2012 GMA 8 meeting.

Joe Cooper, Middle Trinity GCD moved to approve the minutes of the February 29, 2012 GMA 8, seconded by Charles Beseda, Prairielands GCD. The motion carried unanimously, 10-0.

6. Confirmation of replacement of representative for the Region K Water Planning Committee

Only one groundwater district is located in Region K Water Planning Region, which is the Central Texas GCD. GMA 8 must approve and confirm the designated representative for Region K. The Central Texas GCD had taken action to replace the previous representative with Bill Luedecke and the alternate representative with Charles Shell.

Mike Massey, Upper Trinity GCD motioned to approve Bill Luedecke as the primary representative for Region K Water Planning Committee with Charles Shell as the alternate representative. The motion was seconded by Charles Beseda, Prairielands GCD and passed unanimously, with Charles Shell, Central Texas GCD abstaining, 9-0.

7. Discussion and review of GMA 8 groundwater conservation district management plans, accomplishments of GMA 8 and any proposals to adopt or amend existing desired future conditions (GMA 8 District Representatives).

Chapter 36 of the Texas Water Code requires that each groundwater district update the other members in GMA 8 of the status of their management plan.

Eddy Daniel, North Texas GCD reported that their management plan was approved in 2011 and the district is currently working to register new wells and existing non-exempt wells. The general manager is providing annual reports, beginning with January 2012. All non-exempt wells are required to report quarterly with their production information. Their current large project is contributing to the updated groundwater availability model (GAM) for the Upper Trinity aquifer. The temporary rules were adopted in October 2010 with an amendment in January 2013 and a public hearing scheduled for October 8th. Mr. Daniel briefly discussed the changes being addressed at the public hearing.

Joe Cooper, Middle Trinity GCD reported that their management plan was adopted in May 2012. Their annual report includes information provided to their Board with information on the desired future conditions and the status of the drawdown in the aquifer. Their wells are not metered, but they use static water measurements to follow the pumpage from their aquifer. Comanche and Erath Counties had a small drawdown, but Bosque County had a more than 8 foot reduction in aquifer levels.

Craig Schkade, Northern Trinity GCD reported that their District was created in 2008, but not active until 2010. Since the adoption of their management plan, they still have no staff and operate on a volunteer basis. All of their revenue goes toward keeping the district afloat and paying for their portion of the GAM update. Their goals are now to hire a staff and meet the goals of their management plan.

Mike Massey, Upper Trinity GCD provided a written report and paraphrased that information. Their district was created in 2007 and adopted a management plan in 2010. A water well monitoring program was started and is now in phase 2. Montague County has a large population that relies on a Paleozoic aquifer that is not recognized as a water source by the State. The staff prepares an annual report, beginning in 2011, and shows that they are following their rules and management plan. They were also approached by the State Auditor's Office for an audit this year. It appears that the audit will be clean.

Jason Jones, Saratoga UWCD is a very passive district formed in 1989. The district is non-taxing and has no fees and no revenue, except what is provided by the County. The district is operated by volunteers in order to prevent them from being overtaken by other groundwater districts. Lampasas County has limited groundwater resources. The management plan was adopted in 2008 and an update is expected to be adopted soon.

Joshua Grimes, Prairielands GCD reported that the management plan was adopted in 2012 and the first annual report will be provided in 2014. They have just started collecting meter readings and production and are working to put a monitoring program in place.

Gary Westbrook, Post Oak Savannah has a limited groundwater production in GMA 8 because only the deepest part of the Trinity Aquifer is in GMA 8. Most of their district is in GMA 12. Should there become a need to regulate pumping from the Trinity Aquifer they have rules in place to begin that process. Their rules were last amended in June 2012 and their management plan was amended in October 2012.

Judy Parker, Clearwater UWCD was enabled in 1989 and was confirmed in 1999. Their management plan was adopted in 2005 and amended in 2011. They require permits for non-exempt wells and maintain a well location database. They have a district newsletter that is provided on the waste of groundwater and educating citizens on the use of groundwater. They participate in Region G Water Planning Group. They are the only groundwater district in GMA 8 to use the Edwards Aquifer. They monitor the water levels in the aquifers with stream-flow and static water level monitoring.

Charles Shell, Central Texas GCD reported that their management plan was adopted in 2004 and then amended in 2012. They have monitoring wells that monitor six aquifers. The information collected from those wells are available on their websites and are working on two USGS studies on the Ellenberger Model. They help fund rainwater harvesting programs and participate in hazardous waste collection events. The staff reports quarterly and annually to the Board and were audited last year and received a clean report. All wells that pump more than 25,000 gallons per day are required to be permitted.

Jerry Chapman, Red River GCD reported that the district was created in 2009 and adopted a management plan and temporary rules in 2011. They have a registration and metering program for non-exempt wells, in addition to a well sealing program to protect the integrity of the wells. The district is shadowing the Texas Water Development Board (TWDB) to take over the water monitoring program in the area. The temporary rules were amended in 2012.

Mr. Daniel reported that while GMA 8 has not met since February 2012, a significant amount of work has been happening behind the scenes, including work on the desired future conditions (DFC) and GAM update. The GAM update and modeling is being developed by INTERA, the Bureau of Economic Geology and LBG Guyton. The model is expected to be completed in 2014, which will be right in time for the DFC process to begin.

Mr. Cooper thanked Mr. Daniel and the North Texas GCD for their work administering the GMA 8. Participation is not voluntary, but they put forth a great deal of effort organizing GMA 8.

Mr. Cooper also requested to discuss a DFC that is impacting his district negatively. They are experiencing a great deal of drawdown centered around McLennan County and affecting Bosque County. He expressed that he did not have a solution and that it would take all of GMA 8 to provide a solution. He provided a 50 year prediction of drawdown provided by GAM Run 08-06. He expressed that some drawdown is being experienced and it is showing a predicted 489 feet of drawdown. The Hosston Aquifer, which is their deepest level of the aquifer, is expected to have 527 feet of drawdown over 50 years. He expressed that it is not fair for him to limit the production on his permitted wells, when the problem is centered around McLennan County. If these issues are not addressed, the groundwater districts and GMA 8 are not doing their job.

It appears that the areas around Waco are using the most groundwater. Some of the suburbs are trying to get a surface water permit in order to reduce the amount of groundwater used. The City of Waco is looking at impounding more water in the lake, but the State wants them to send the water back downstream. Mr. Cooper explained that he is not asking for action at this time, but wants it to be included in discussions.

Mr. Daniel agreed that there are some issues and as the next DFC process begins, those issues will be discussed and addressed. Mr. Massey explained that his district will be requesting GMA 8 to address the Paleozoic aquifer in his district. They are not included in any reports by the TWDB and he feels this needs to be changed. Mr. Chapman explained that Senator Fraser provided a presentation at the Groundwater Summit earlier this fall that the groundwater districts need to work together more or the State will take action. Ms. Parker explained that they have a drawdown problem, but do not have a district to work with, which is a problem. The southern side of Bell

County is experiencing a significant level of drawdown, but until the State backs up the DFCs, they are just a recommendation on paper. Mr. Shell said that they have a common problem with a county that has no groundwater district and is over pumping the Trinity Aquifer.

8. Briefing and discussion on changes to the Desired Future Conditions process resulting from the passage of Senate Bill 660 by the 2011 Texas Legislature (Bill Mullican)

Bill Mullican, a consultant working on the GAM update, was requested to address the GMA 8 committee regarding the changes to the DFC process. SB 1282 reset the clock for all GMAs in the state to adopt their DFCs by May 2016. The old process of adopting DFCs is completely different. The process has adapted over the last 16 years. Including aquifers that are not currently considered, such as Paleozoic aquifers, will change the process again. Chapter 36.108 of the Texas Water Code was modified considerably. There is too much required up to the point of adopting the proposed DFCs to make last minute decisions. GMA 8 must now have two official votes in order to adopt DFCs. There is a required vote to adopt DFCs by May 1, 2016. Those will then go to the groundwater districts for public hearings and public comment. Those comments will then go back to the GMA 8 for a final vote. The DFCs will also have to be run through the considerations before they can be approved. Each district will need to provide historical use and projected use in order to include them in the proposed DFCs. The considerations will take a great deal of time and discussion to work through, so they should only be taken two or three at a time. Mr. Mullican reviewed in detail the process of each of the nine considerations and the information that will need to be collected.

Each of the nine considerations will need to have an administrative record. This would include an agenda posting with the consideration clearly listed, all discussion materials, and then the approved minutes with the discussion memorialized. GMA 8 will also have to consider the impacts of the DFCs on the socioeconomics of the area, effects on private property rights, and the feasibility of achieving the proposed DFCs. The DFC process will require GMA 8 to be much more deliberate than in the previous round.

The revised model will be completed in 2014 and will hopefully be able to make conceptual projections as early as April or May 2014. Groundwater districts should begin to collect their groundwater production information to put into the model in order to begin running projections. Mr. Daniel recommended that after the first of the year GMA 8 begin meeting regularly to begin working through the information in order to meet the deadlines. He recommended scheduling quarterly meetings until the DFCs have been adopted. He also recommended the groundwater districts consider hiring a consultant to manage the process and mediate between the districts. The TWDB will not be running predictive simulations for GMAs before adoption of the DFCs without funding from the GMAs.

Mr. Massey recommended GMA 8 hire Mr. Mullican in order to work as the contract manager for the DFC process. Mr. Mullican is currently working with as project manager for the GAM update. Ms. Parker asked if GMA 8 was required to submit bids for consultants and Mr. Daniel responded that he did not believe so, but would verify.

9. Receive update on groundwater related legislation and other matters.

Mr. Larry French with the TWDB provided a brief review. The last legislative session focused on the energy exploration. The State Water Implementation Fund of Texas (SWIFT) dealt with modifying the setup of the TWDB, which included changing to a three-member employed administrative board. It also hired a new Executive Administrator, Kevin Patterson who is currently with the Governor's office. He will begin work in October.

The total estimated recoverable storage will be provided to GMA 8 by the TWDB. This is the total amount of water within the aquifer. The TWDB is currently in the process of issuing a report to each GMA with the information. It should be complete by the end of 2013. The information is available on the TWDB website. The website also includes a number of documents that will provide background information on how the TWDB is

moving forward with options for how the reports for the DFCs could look. Their website also includes information on how the TWDB will move from the DFCs to the managed available groundwater.

Mr. French also explained the method to add relevant aquifers, including Paleozoic aquifers. GMA 8 should develop DFCs and provide them to the TWDB for managed available groundwater information to be developed.

Mr. Massey expressed appreciation on behalf of the four groundwater districts participating in the groundwater model update for the assistance of the TWDB.

Ms. Kristen Fancher of the Lloyd Gosselink firm addressed the committee. She recommended that a scope of services be developed to take back to the groundwater district boards for approval to move forward with approval to enter into an agreement to hire a consultant to guide the DFC process. The groundwater districts will need to collect all public comments received in the 90-day period and provide them to the GMA 8 for inclusion in the report. Every district will need to follow the due process in order to prevent the actions taken by the GMA 8 from being unusable. Every public comment or recommendation that the GMA 8 does not use will need an explanation as to why it was not used.

Ms. Fancher also expressed that the 2013 Legislature saw brackish water bills and long-term permitting issues, but this was just a preview of the 2015 session. She expressed a belief that those will return in 2015, but did not expect major changes to the DFC process. This is the chance for GMAs to show the State that local control will work for developing future goals. The Railroad Commission was surprised at the response from groundwater districts on their proposed rule changes. This started the dialogue between the energy exploration and the groundwater interests.

10. Set date, time, and place of next meeting and discuss agenda items.

Mr. Daniel expressed a desire to schedule a meeting for January 2014. He offered to develop a talking points memo to circulate to each groundwater district from a GMA 8 perspective to include on groundwater district agendas. GMA 8 needs to begin meeting at least quarterly. Mr. Cooper agreed with the quarterly meetings being the minimum schedule. Mr. Schkade also requested a Scope of Services being developed. The next meeting was scheduled tentatively for the third Thursday in January, which is the 21st.

11. Closing comments.

Mr. Daniel reminded the audience to please sign in so that the GMA 8 can include all present visitors. He thanked Mr. Cooper for posting the agenda for Fox Crossing WD. He also thanked the staff for their assistance. Mr. Massey thanked the Cleburne Conference Center and Prairielands GCD for scheduling the meeting and securing the location for the meetings. The Committee discussed the meeting location and agreed that the Cleburne Conference Center served as the preferred meeting location.

12. Adjourn.

The Committee unanimously agreed to adjourn the meeting at 11:55 AM.

The GMA 8 Committee unanimously approved the minutes on this _____ day of _____, 2013.

Recording Secretary

Chairman

ATTACHMENT 9

Mullican and Associates
19212 Luedtke Lane
Pflugerville, TX 78660

December 6, 2013

Eddy Daniel
Chairman
Groundwater Management Area 8
C/o North Texas Groundwater
Conservation District
PO Box 508
Gainesville, TX 76241
VIS EMAIL: eddy@dbiconsultants.com

Dear Mr. Daniel,

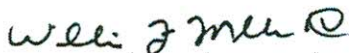
Per your request, I am providing this scope of professional services proposal for Groundwater Management Area 8. This scope is to provide professional services, as described in the attached documents, for the ongoing joint-planning process for Groundwater Management Area 8. This scope of professional services is based on a detailed analysis of the tasks and efforts required to meet the statutory requirements of Texas Water Code Section 36.108.

This proposal is based on the assumption that the North Texas Groundwater Conservation District will continue to provide administrative support to this process with respect to the distribution of meeting notices and coordination with Mullican and Associates on preparation of draft meeting minutes.

This scope of professional services proposal is based on an estimate that this process will require 10 public meetings of Groundwater Management Area 8. If however, the process requires more or less meetings, the scope of professional services for Task 2-A and Task 3-C will be adjusted accordingly. Also, I anticipate that this process will cover the majority of 34 months to complete. As such, the proposed budget should be equally divided into 3 budget years (February 2014 – November 2016). For budget purposes, dividing the total fee equally over the three year process would be appropriate.

Please let me know if you have any questions or need additional information on this proposal.

Sincerely,



William F. Mullican III

Task No.	Task Description	Hours	Unit Cost
1	Development of Proposed Desired Future Conditions (DFCs)		
1-A	Research, assemble, and present supporting information including current estimates of modeled available groundwater (MAG) on an aquifer/county basis, water demand projections from the 2011 regional water plans, and historic groundwater use estimates on an aquifer/county basis. Consultant will work with District Representatives to resolve outstanding issues. At a subsequent meeting of GMA 8, consultant will facilitate discussion with District Representatives to achieve agreement on the interim approach for proposed DFCs that will be utilized in subsequent considerations (see Task 2).	24	\$3,960
1-B	Consultant will coordinate work efforts for the GMA 8 joint-planning process with the ongoing Northern Trinity/Woodbine Aquifer GAM Project (NTWGAM Project). This effort will focus on working with INTERA, Inc., to develop 1 – 2 pumping scenarios, based on the agreed to approach for draft DFCs (achieved at conclusion of Task 1A), to be utilized during predictive simulations to be performed as part of the NTWGAM Project. Results from these predictive simulations, in the form of predicted drawdowns in specified aquifers and corresponding estimates of MAG, along with other basic water budget information will be compiled as part of this subtask and presented to the District Representatives. If necessary, a process for requesting additional predictive simulations will be developed.	16	\$2,640
1-C	It is anticipated that District Representatives will want to develop DFCs for other aquifers in GMA 8 (in addition to the aquifers for which DFCs are already adopted). Consultant will work with District Representatives to identify any aquifers for which DFCs have not been adopted historically but for which a need is now recognized. Research will be conducted to identify analytical tools available for quantifying MAGs for these aquifers. This effort will include meeting with the TWDB Groundwater Resources Division to evaluate approach and availability of tools. Results of this effort will be presented to District Representatives for their concurrence or revision.	24	\$3,960

2		The Consideration Process		
2-A	Consultant will work with GMA 8 administrator at North Texas GCD to develop meeting schedules, agendas, postings, and meeting minutes necessary to ensure efficient and timely joint-planning process and preparation of complete Explanatory Report. These three elements, meeting agendas, meeting postings, and meeting minutes, will serve as the primary documentation in the Explanatory Report that all requirements of Texas Water Code Section 36.108 (d) (1 - 9) have been successfully met.	160	\$26,400	
2-B	Consultant will prepare interim draft resolution for proposed DFCs, including summary of DFCs for consideration in subsequent phases of analysis.	16	\$2,640	
2-C	Consideration of provisions in Texas Water Code §36.108(d) (1-9).			
2-C.1	TWC Section 36.108 (d) (1) requires the consideration of aquifer uses or conditions within GMA 8, including conditions that differ substantially from one geographic area to another. Consultant will; assemble and present information from GCDs, ongoing Northern Trinity/Woodbine Aquifer GAM Project, 2012 State Water Plan (SWP), and draft information from the 2016 regional water plans to characterize current levels of groundwater use in each county, characterize variation in usage patterns across GMA 8, and prepare materials characterizing use and conditions for inclusion in the Explanatory Report.	32	\$5,280	
2-C.2	TWC Section 36.108 (d) (2) requires the consideration of water supply needs and water management strategies included in the 2012 Texas Water Plan. Consultant will prepare information and presentation for each county and by water use sector, for water demands projections and water supply needs. In addition, consultant will identify water management strategies recommended in the 2012 SWP for meeting water supply needs as part of this consideration and prepare materials documenting water supply needs and WMS for discussion with GMA 8 and inclusion in Explanatory Report.	20	\$3,300	

2-C.3	<p>TWC Section 36.108 (d) (3) requires the consideration of hydrologic conditions of groundwater resources including estimates of total recoverable storage. Consultant will, for interim purposes, compile required information from current Northern Trinity/Woodbine GAM (2004 version), coordinate with INTERA, Inc., to compile information from the updated Northern Trinity/Woodbine GAM, including estimates of the annual amount of recharge from precipitation to the groundwater resources within the aquifers, annual volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams, and rivers; and the annual volume of flow into and out of the aquifers. Consultant will coordinate with and receive estimates of total estimated recoverable storage from the TWDB and prepare materials documenting hydrological conditions for discussion with GMA 8 and inclusion in Explanatory Report. Upon adoption of the Northern Trinity/Woodbine GAM update by the TWDB, all information assembled for interim purposes will be updated for presentation to District Representatives and inclusion in the Explanatory Report.</p>	40	\$6,600
2 - C.4	<p>TWC 36.108 (d) (4) requires the consideration of other environmental impacts, including impacts on spring flow and other interactions between groundwater and surface water. Consultant will review existing sources of information to determine the potential for interaction between groundwater formations and surface water, identify potential impacts of proposed DFCs on the environment including surface and groundwater interactions, and prepare materials documenting other environmental impacts for discussion with District Representatives and inclusion in Explanatory Report.</p>	20	\$3,300
2-C.5	<p>TWC Section 36.108 (d) (5) requires that as part of the joint-planning process, District Representatives shall consider the impact of proposed DFCs on subsidence. Consultant will prepare a technical memorandum for inclusion in the Explanatory Report regarding the geological framework of GMA 8 and statement of "not applicable".</p>	6	\$990

2-C.6	TWC Section 36.108 (d) (6) requires District Representatives to consider the socioeconomic impacts reasonably expected to occur as a result of the proposed DFCs. To accomplish this task, consultant will review and compile information on the socioeconomic impacts of not meeting water supply needs included in the 2012 State Water Plan, review and compile information on other socioeconomic studies applicable to GMA 8 and water resources issues, and prepare materials documenting socioeconomic impacts for discussion with the GMA 8 District Representatives and inclusion in Explanatory Report.	24	\$3,960
2-C.7	TWC Section 36.108 (d) (7) requires District Representatives to consider the impact of proposed DFCs on the interests and rights in private property. To accomplish this task, consultant will prepare a presentation for District Representatives regarding foundational aspects of this requirement, and facilitate discussions with District Representatives with respect to this requirement. This effort may include presentations from selected legal experts in the field of private property rights protections. These discussions will be captured in detail in meeting minutes and summarized in a Technical Memorandum that will be included in the Explanatory Report.	12	\$1,980
2-C.8	TWC Section 3.6.108 (d) (8) requires District Representatives to consider the feasibility of achieving the proposed DFCs. To accomplish this task, consultant will prepare a presentation for District Representatives consideration regarding potential approaches to be taken to meet this requirement. Based on agreed to approach, conduct analysis and research necessary to evaluate the feasibility of achieving proposed DFCs.	24	\$3,960
2-C.9	As part of the consideration process prescribed in TWC Section 36.108 (d) (1-9), District Representatives are also directed to consider any other information relevant to the specific proposed DFCs. To accomplish this task, Consultant will work with District Representatives on any areas where the need for additional information is agreed to.	8	\$1,320
Task 3	Program/Process Management		
3-A	Consultant will provide monthly progress reports to GMA 8 District Representatives on status of required elements of the joint-planning process.	34	\$5,610

3-B	Consultant will prepare the draft and final Explanatory Report, including formal descriptions of DFCs adopted and any written materials necessary to synthesize the required but somewhat disparate elements of the Explanatory Report.	40	\$6,600
3-C	Consultant will strategically schedule, organize and prepare necessary materials for all GMA 8 joint-planning meetings throughout the current cycle of planning. Pre- and post-meeting preparations are described in Task 2A. This task is strictly for travel and time at meetings.	80	\$13,200

	Budget
Task 1	\$10,560
Task 2	\$59,730
Task 3	\$25,410
Project Total	\$95,700

Groundwater Management Area 8

Scope of Services

Organization, facilitation, analysis, and process management for joint-planning process and preparation of Explanatory Report as required by Texas Water Code Section 36.108 (d) for Groundwater Management Area 8.

The joint-planning process, as required by Texas Water Code §36.108, will be accomplished through a very deliberate and facilitated dialogue with District Representatives in Groundwater Management Area 8 (GMA 8) designed to adopt updated Desired Future Conditions (DFCs) and to address all statutory requirements for the process. In general, Bill Mullican, Principal of Mullican and Associates (Consultant), will serve as the process manager to accomplish all tasks described below throughout the current joint-planning effort. Specific tasks to be performed include:

Task 1 Development of proposed Desired Future Conditions (DFCs)

Task 1-A Due to the timing of the ongoing Northern Trinity/Woodbine Aquifer GAM Project (NTWGAM Project), it will be necessary for GMA 8 District Representatives to agree conceptually to an approach for addressing required “considerations” included in Texas Water Code Section 36.108 (d)(1-9) before the updated model is available for predictive simulations. This GMA 8 approach could be, for example, to utilize historic water use information from individual groundwater conservation districts (GCDs) and draft water demand projections being developed as part of the regional water planning process to, on an interim basis, quantify anticipated estimates of MAG and draft DFCs. To meet this requirement, Consultant will research, assemble, and present supporting information including current estimates of modeled available groundwater (MAG) on an aquifer/county basis, water demand projections from the 2011 regional water plans, and historic groundwater use estimates on an aquifer/county basis. At the conclusion of the presentation of this information, District Representatives will be asked to review groundwater use and water demand projection estimates for their respective GCDs for concurrence or revision. Consultant will work with District Representatives to resolve outstanding issues. At a subsequent meeting of

GMA 8, Consultant will facilitate discussion with District Representatives to achieve agreement on the interim approach for proposed DFCs that will be utilized in subsequent considerations.

Task 1-B Coordination of work efforts for the GMA 8 joint-planning process with the ongoing Northern Trinity/Woodbine Aquifer GAM Project (NTWGAM Project). This effort will focus on working with INTERA, Inc., to develop 1 – 2 pumping scenarios, based on the agreed to approach for draft DFCs (achieved at conclusion of Task 1A), to be utilized during predictive simulations to be performed as part of the NTWGAM Project. Results from these predictive simulations, in the form of predicted drawdowns in specified aquifers and corresponding estimates of MAG, along with other basic water budget information will be compiled as part of this subtask and presented to the District Representatives. If necessary, a process for requesting additional predictive simulations will be developed.

Task 1-C On the basis of recent discussions, it is anticipated that District Representatives will want to develop DFCs for other aquifers in GMA 8. Although these aquifers may not have officially been designated as major or minor aquifers by the Texas Water Development Board (TWDB) to this point, recent demographic developments have resulted in the recognition by certain GCDs that these aquifers will also need to be managed in the future, and thus there is a need for DFCs and estimates of MAG. Consultant will work with District Representatives to identify any aquifers for which DFCs have not been adopted historically but for which a need is now recognized. Research will be conducted to identify analytical tools available for quantifying MAGs for these aquifers. This effort will include meeting with the TWDB Groundwater Division to evaluate approach and availability of tools. Results of this effort will be presented to District Representatives for their concurrence or revision.

Task 2The “Considerations” process

Task 2-A Consultant will work with GMA 8 administrator at North Texas GCD to develop meeting schedules, agendas, postings, and meeting minutes necessary

to ensure efficient and timely joint-planning process and preparation of complete Explanatory Report.

Task 2-B Consultant will prepare interim draft resolution for proposed DFCs, including summary of DFCs for consideration in subsequent phases of analysis.

Task 2-C Consideration of provisions in Texas Water Code §36.108(d)(1-9).

Task 2-C-1 District Representatives shall consider aquifer uses or conditions within GMA 8, including conditions that differ substantially from one geographic area to another. To accomplish this task, Consultant will:

- i. Assemble and present information from GCDs, 2012 State Water Plan (SWP), and draft information from the 2016 regional water plans to characterize current levels of groundwater use in each county.
- ii. Characterize variation in usage patterns across GMA 8.
- iii. Prepare materials characterizing use and conditions for inclusion in the Explanatory Report.

Task 2-C-2 District Representatives shall consider water supply needs and water management strategies (WMS) in the 2012 State Water Plan (SWP). To accomplish this task, Consultant will:

- i. For each county and by water use sector, water demands projected in the 2012 SWP and water supply needs will be compiled.
- ii. Identify WMS recommended in the 2012 SWP for meeting water supply needs.
- iii. Prepare materials documenting water supply needs and WMS for discussion with GMA 8 and inclusion in Explanatory Report.

Task 2-C-3 District Representatives shall consider hydrological conditions, including for each aquifer in GMA 8 the total estimated recoverable storage as provided by the TWDB Executive Administrator, and the average annual recharge, inflows, and discharge. To accomplish this task, Consultant will:

- i. For interim purposes, compile required information from current Northern Trinity/Woodbine GAM (2004 version).

- ii. Coordinate with INTERA, Inc., to compile information from the updated Northern Trinity/Woodbine GAM as soon as it is available. This information will include:
 - a. The annual amount of recharge from precipitation to the groundwater resources within the aquifers;
 - b. The annual volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams, and rivers; and
 - c. The annual volume of flow into and out of the aquifers.
- iii. Coordinate with and receive estimates of total estimated recoverable storage from TWDB.
- iv. Prepare materials documenting hydrological conditions for discussion with GMA 8 and inclusion in Explanatory Report.

Task 2-C-4 District Representatives shall consider other environmental impacts, including impacts on spring flow and other interactions between groundwater and surface water. To accomplish this task, Consultant will:

- i. Review existing sources of information to determine the potential for interaction between groundwater formations and surface water.
- ii. Identify potential impacts of proposed DFCs on the environment including surface and groundwater interactions.
- iii. Prepare materials documenting other environmental impacts for discussion with the GMA 8 and inclusion in Explanatory Report.

Task 2-C-5 District Representatives shall consider the impact of proposed DFCs on subsidence. To accomplish this task, Consultant will:

- i. Prepare a technical memorandum for inclusion in the Explanatory Report regarding the geological framework of GMA 8 and statement of “not applicable”.

Task 2-C-6 District Representatives shall consider the socioeconomic impacts reasonably expected to occur as a result of the proposed DFCs. To accomplish this task, Consultant will:

- i. Review and compile information on the socioeconomic impacts of not meeting water supply needs included in the 2012 State Water Plan.
- ii. Review and compile information on other socioeconomic studies applicable to GMA 8 and water resources issues.
- iii. Prepare materials documenting socioeconomic impacts for discussion with the GMA 8 and inclusion in Explanatory Report.

Task 2-C-7 District Representatives shall consider the impact of proposed DFCs on the interests and rights in private property, including ownership and the rights of management area landowners and their lessees and assigns in groundwater as recognized under Texas Water Code Section 36.002. To accomplish this task, Consultant will:

- i. Prepare a presentation for District Representatives regarding foundational aspects of this requirement.
- ii. Facilitate discussions with District Representatives with respect to how proposed DFCs will potentially impact private property rights. These discussions will be captured in detail in meeting minutes and summarized in a Technical Memorandum that will be included in the Explanatory Report.

Task 2-C-8 District Representatives shall consider the feasibility of achieving the proposed DFCs. To accomplish this task, Consultant will:

- i. Prepare a presentation for District Representatives regarding potential approaches to be taken to meet this requirement.
- ii. Based on agreed to approach, conduct analysis and research necessary to evaluate the feasibility of achieving proposed DFCs.

Task 2-C-9 District Representatives shall consider any other information relevant to the specific proposed DFCs (uses or conditions of an aquifer within GMA 8 that

differ substantially from one geographic area to another). To accomplish this task, Consultant will:

- i. Prepare a presentation for District Representatives regarding any other information deemed to be relevant to specific proposed DFCs.

Task 3 Program Management

Task 3-A Provide routine progress reports to GMA 8 District Representatives on status of required elements of the joint-planning process.

Task 3-B Prepare the draft and final Explanatory Report, including formal descriptions of DFCs adopted and any written materials necessary to synthesize the required but somewhat disparate elements of the Explanatory Report.

ADJOURN