

**LONE STAR
GROUNDWATER CONSERVATION DISTRICT**

Wednesday, May 5, 2015

**MINUTES (AMENDED) OF THE PUBLIC WORKSHOP
OF THE FINDINGS AND REVIEW COMMITTEE**

***PUBLIC WORKSHOP OF FINDINGS AND REVIEW COMMITTEE
REGARDING THE JOINT PLANNING PROCESS IN GROUNDWATER
MANAGEMENT AREA 14***

The Findings and Review Committee of the Lone Star Groundwater Conservation District hosted a workshop dedicated to informing the public and receiving input regarding the joint-planning process in Groundwater Management Area 14. The workshop, open to the public, was held at the District offices located at 655 Conroe Park North Drive, Conroe, Texas.

CALL TO ORDER:

President Tramm called the meeting to order at 1:32 p.m. announcing that is was open to the public.

ROLL CALL:

The roll was called of members of the Findings and Review Committee, to wit:

Richard J. Tramm
John D. Bleyl, PE
Jace Houston
Rick Moffatt

INTRODUCTIONS AND OVERVIEW OF MEETING GOALS:

For the record, President Tramm noted that there were several other Lone Star GCD board members present, those being: Director Billy Wood and Director Scott Weisinger. Director Jim Stinson joined the meeting at 1:34 pm. President Tramm also introduced Kathy Turner Jones, General Manager; Paul R. Nelson, Assistant General Manager; Mark Lowry, District Engineer; John Seifert and Bill Mullican, District Consultants (*Copies of the public sign-in sheets are attached hereto as Exhibit "A"*).

President Tramm stated that the primary purpose of the meeting is to have additional discussions on a variety of items related to GMA 14. In addition, he invited questions and input from the public and thanked them for their attendance.

PRESENTATION OF LONE STAR GROUNDWATER CONSERVATION DISTRICT MILESTONES RELEVANT AND APPLICABLE TO THE JOINT-PLANNING PROCESS IN GROUNDWATER MANAGEMENT AREA 14:

Mr. Bill Mullican provided a PowerPoint presentation detailing the history of the GMA process, the regulations and requirements applicable to GMA 14, and an overview of the process to date. *(A copy of Mr. Mullican's presentation is attached hereto as Exhibit "B")*

PRESENTATION ON PROGRESS TO DATE AND REMAINING TASKS FOR DISTRICT REPRESENTATIVES IN THE CURRENT ROUND OF JOINT-PLANNING IN GROUNDWATER MANAGEMENT AREA 14:

At 1:42 p.m., Mr. Mullican moved directly to Item 4 on the agenda; a continuation of the PowerPoint and a presentation on the progress to date and remaining tasks for District representatives in the current round of joint-planning in Groundwater Management Area 14. Mr. Mullican proceeded with his presentation and finished by stating that GMA 14 had been meeting regularly throughout the year and has gone through the long process of considering and analyzing the nine statutory criteria in the development of DFCs. Mr. Mullican showed a slide depicting the DFCs currently being considered: a 26 foot decline in the Chicot, a rebound of 4 feet in the Evangeline and the Burkeville, and a 34 foot decline in the Jasper. The next steps are that the GMA will need to complete its formal consideration of the statutory criteria in relation to the DFC option currently before the GMA and ultimately adopt a proposed DFC to submit to the districts to begin the formal comment process. If new or different DFCs were to be considered at the next meeting, the GMA would have to back through all the considerations that have already been done at this point. Once any new proposed DFC's have been run through the consideration process, the next step would be for the GMA to adopt the DFC's and submit for the public review process. Following that, each of the member districts would prepare their individual summary report. After approval by the individual districts they would go back to the GMA for adoption and preparation of the explanatory report. Within the explanatory report, there must be an explanation of how a "balance" was achieved; a balance between the highest practicable level of groundwater production and the groundwater district's responsibility to conserve, preserve and protect the groundwater resources.

DISCUSSION OF PUBLIC PARTICIPATION IN GROUNDWATER MANAGEMENT AREA 14 JOINT-PLANNING EFFORTS:

Mr. Mullican then moved to Item 5 on the agenda and pointed out that the next GMA 14 meeting would be held at the offices of the Lone Star Groundwater Conservation District on May 28th, and after discussing with other members of the GMA, there has been agreement to put an item on the agenda that is explicitly designed to facilitate any entity, whether it's a utility district, a municipality, a private entity. Anyone who wants to attend and make a technical presentation

on a proposed alternative Desired Future Condition that they want the GMA to consider we will have it that day. The members are committed to allowing everyone reasonable time to make their presentation, although we may have to balance that depending on how many people show up to do so, but we anticipate making time available to all who desire to do so. Mr. Mullican then said he would answer any questions that people might have.

President Tramm then asked Mr. Mullican about the alternatives and the timeframes involved if new DFC's were proposed at some point in the process. Mr. Mullican responded by stating that, for example, if in January of 2017, one wanted to go to GMA14 with a request to amend the existing DFC's, he believed that the GMA could get to the point of having new proposed DFC's within a year. Then the 90-day process would start, the 90-day public hearing process.

Director Weisinger then stated that he represents a group of persons who have concerns about the 64,000 acre-feet and directed Mr. Mullican's attention to a slide that showed the 64,000 acre-feet running all the way out to the year 2070. He stated that he has an issue with this because what we're pumping in the District, we can never get to this number. He stated that he was disturbed and feels we have not looked at the history we have here at the District about where we need to go from here, and that's what the people here in the county are arguing about. Director Weisinger then stated that he, as a Board member, couldn't support it because he feels it's clear that we just can't get there and that he would like Mr. Mullican, as a consultant, look into how we can use our current information and take that into consideration on what this Board needs to do for the stakeholders and the people in this county. He further stated that he was ready to address it and that we've been dancing around this thing since August of last year and he's tired of talking about it. He wants to get to the bottom of this issue. The board needs to have the opportunity to see how this fits into the management plan for the people in the county.

Director Houston referred to Director Weisinger's statement about "not being able to get to this number," noting that the District could adopt rules that would restrict county-wide pumpage so that it didn't exceed 64,000. Director Weisinger stated he would not support that. He is advocating for looking at the information that we have at the District, with the current rules in place, and see where we need to go without any changes to the current rules. Before any changes are made, we need to look at this number and how it fits with the current rules.

Director Houston clarified that Director Weisinger would like to continue to analyze the 64,000 number, and if that number can be different, do the work, make the analysis, change it if it can be changed, and then as a second step, amend the rules to reflect the new number as a goal/plan. Director Weisinger agreed, noting that we need to instruct our consultants to see where we are, and with our current rules where the number would be. He pointed out that even with all GRPs meeting the 30% reduction goal, we won't reach the 64,000 number; under current rules, we can't achieve that number. Director Houston said that his point is that the fact that the District's rules result in permits more than 64,000 in and of itself is not a problem. It means that the pumpage isn't down to what the planning number says will result in sustainable water levels. But that's why we're doing adaptive management.

Director Bleyl stated that he was in agreement with Director Weisinger, with an additional note. He thinks we need to look at the DFCs first and have a policy decision on what we want the aquifers to look like in 50 years, and then back into a model, which is not going to be 64,000. Director Houston noted that's the purpose of the Seifert study. Director Bleyl noted that he just thinks we need to look at DFCs differently.

Mr. Mullican noted that he has previously presented this information to the Board in April 2013, prior to the April GMA meeting. The purpose of that presentation was to obtain any feedback from the Board, and none was received at that time.

Director Weisinger also noted that Polk County, a smaller county, is allowed more usage than Montgomery County, and he'd like to know why. He knows it can't be addressed today, but would like help understanding. Mr. Mullican replied that information has been discussed at the GMA 14 meetings. Director Houston asked if he was referring to DFC numbers or actual usage. Director Weisinger could not remember exactly; he has been asked by the people he represents to obtain an explanation.

PRESENTATION ON LONE STAR GROUNDWATER CONSERVATION DISTRICT EFFORTS IN ANTICIPATION OF THE NEXT ROUND OF JOINT-PLANNING IN GROUNDWATER MANAGEMENT AREA 14 (FROM 2016-2020):

Mr. Seifert provided a PowerPoint presentation on the current status of the strategic planning process. His presentation included project objectives, as well as status of each objective. He also discussed the GMA 14 and Region H planning efforts for 2020. Details are provided in his presentation. *(A copy of Mr. Seifert's presentation is attached hereto as Exhibit "B")*

Mr. Weisinger noted that the stakeholders he represents have asked about the fact that our neighbors have no caps. Will we be able to see in this study what our neighbors are doing as compared to Lone Star, how they are able to manage the aquifer. President Tramm said he is open to adding this element to the study, which would require additional cost.

Audience member Tom Michael spoke up with regard to the Harris-Galveston Subsidence District. He noted that the subsidence districts do not have a number cap, but they accomplish the same goal of achieving a sustainable water level with a percentage cap. If you compare their methodology to Lone Star's, they are very similar. Director Weisinger noted that he was not referring to Harris and Ft. Bend Counties. He was more focused on what the other groundwater districts in the area are doing.

Director Weisinger asked if Mr. Seifert was doing a study separate from the party-line chart that shows the 64,000 acre number. Mr. Seifert answered yes, he is.

RECEIVE QUESTIONS AND INPUT FROM WORKSHOP PARTICIPANTS:

Mike Massey, representing the Lake Conroe Communities Network (LCCN), was the first to speak. He presented a letter, reading it to those present. *(A copy of the LCCN letter of input is attached hereto as Exhibit "C")*

Director Wood then asked Mr. Massey about a statement in the letter that says, "LCCN finds logic built on false premises, an over-reliance on simulation modeling, and physical behaviors of critical observable, measurable parameters that contradict results of simulation modeling." Director Wood asked Mr. Massey to elaborate on that statement, and asked where LCCN obtained their numbers, and asked about the science behind the statement. Mr. Massey noted that is a complicated answer, and referred to information provided at the group's town hall meetings last week. The Gulf Coast Aquifer has been producing from 400-600,000 acre-ft./year for the last 60 years, and they expect this to continue. Therefore, the aquifer is being replenished ten times the 64,000 acre-foot amount. There is a belief often stated and used that connects water level to storage, implying that water levels going down being a problem. There is no substantive link between water levels going down and storage in an artesian well. You can't produce an artesian well without a hydraulic head. Increasing the water depth produces increased hydraulic head. Increased hydraulic head pushes more water to the well, allowing you to produce more. That's just the engineering of a well, and is not a reflection on whether the aquifer is losing storage. Director Houston noted that the District didn't base its regulations on storage; the problem with this aquifer has always been yield. When the water levels go down, well yields decline. As the yields decline, it costs a lot more to produce water, and customer demands can't be met when yields decline without significant additional costs. What drove the board in the early 2000s to adopt a goal of trying to achieve a sustainable water level was economics. Water utilities can't keep up with falling yields. Water wells become money pits. If utilities could afford to mine the aquifers, they would, because it's cheaper than using surface water. Director Houston urged Mr. Massey to talk to some other folks because there's a lot more to the picture.

Amy Beussink, USGS, then stated that USGS has been collecting water level data for decades. She looked at two different sets of wells – one near Loop 336 in Conroe, which show (from 1954-2000) about a 200 ft decline in water levels over a 50-year period (4ft/year). The most recent reports (2000-2014) show another 200 ft. decline in water levels, which is triple the rate of the previous 50 years. You see the exact same thing in southern Montgomery County.

Mr. Massey referred back to his idea of needing lower water levels in order to produce more water, and Ms. Beussink noted that this theory was incorrect in these aquifers. Director Houston noted that lowering the hydraulic head over the past 65 years in Montgomery County has not resulted in increased well yields. Well yields have dropped steadily as water levels have dropped.

Director Houston said there is a certain amount of decline we can afford, but it is often harder on the smaller utilities than the larger ones. It is a very important policy question to have a good conversation about with regard to how much reduction in water level over time we can afford.

Director Moffatt cited an example of a particular well at his utility. His pumpage dropped from 1,100 gallons to 500 gallons. How can I provide water to my customers if my aquifer levels

have dropped so far that I've reduced my capacity to pump it? I've had to add two wells in the last ten years to provide my customers with water. That's what the Groundwater District is here for, is to regulate, to make sure we will be able to keep these wells functioning for years to come, not just now or five years from now.

President Tramm offered for others to speak if interested.

Ms. Beussink had a comment about the "invalid science" references. USGS has been doing data collection for the area, and USGS is highly-renowned throughout the country for valid data. She realizes much of the information the District uses starts with their data. She asked for Mr. Mullican's comments with regard to the Texas Water Development Board's requirements. Mr. Mullican reviewed the requirements that the studies have to go through. Regardless of who builds the models, the TWDB's technical review process is very stringent.

Director Weisinger began talking about the 64,000 number, and noted that it did not come from the USGS. Amy agreed. Her concern is previous comments made with regard to "invalid science". She wanted to point out that the numbers provided by USGS are accurate and valid.

Mr. Thornhill, Thornhill Group, said that he would like to clarify statements he previously made, specifically with regard to the management plan. In his discussions with Robert Mace, Craig Peterson, Robert Bradley and Bill Hutcheson (TWDB), he learned that the TWDB does not approve the management plans on a technical basis, but on an administrative basis only. Similarly, the DFCs are only required to be "possible". In the petition process, the only requirement for a DFC is for it to be "reasonable".

Thornhill said that today there is 100,000 acre-feet/year being pumped. If this number remains at 100,000, the water levels will continue to decline but then will start to stabilize.

Thornhill continued that in this process, consultants have continued to recommend to the District, and to GMA 14, that the same reverse-engineered MAG be included to re-figure a new DFC. He does not think that's responsible. Mullican replied that is categorically false. At the May and June meetings of GMA 14, there was much discussion about what the GMA wanted to do and the District representatives said they wanted to continue what had been established in the first round of joint planning. Houston noted that in the Seifert study, the intention is to have the ability to run additional scenarios. You have to start with pumpage in order to work the model. It's the reality of how we have to run it. When coming up with the 64,000 the District looked at a number of different options and factors. The intention is to re-run it, to work with everyone to optimize what we can get out of the aquifer.

Thornhill continued that there needs to be a consistent legal basis for rules and regulations. Secondly there needs to be a very good science basis for policy. If economics is a big issue, let's compare. He then read a statement related to the DFC process. Mr. Mullican stated that he has asked the TWDB for a copy of the memo mentioned in Mr. Thornhill's comments, and they have told him they don't know about the memo. Mr. Thornhill stated that he would provide a copy to the District.

Mr. Bob Harden then took the podium to speak, thanking the District for the opportunity for the public hearing and the discussion. He stated that today the city of Conroe has passed a resolution, regarding the process the GMA 14 has entertained so far. He pointed out one portion of the resolution that discusses the GMA 14's engagement of a reverse calculation. He can't think of a more wrong way of doing it; it violates so many principles.

Mr. Massey added comments about the complexity of economic predictions, and then Mr. Harden commended the USGS for all their monitoring, stating that it is valuable to him and encouraged them to continue their monitoring because a long history of monitoring is very valuable.

The final speaker was Russ Johnson, on behalf of the city Shenandoah. He stated that the board has done a lot of planning and hard work and have largely heard criticism but not constructive suggestions or solutions. The city of Shenandoah wants to be part of constructive suggestions and solutions to the issues that confront this board. The legislature realized that there needed to be coordination and joint planning so they established the Desired Future Conditions and they discovered that instead of having joint planning you had instead Districts deciding what their planning goals were, and therefore what their DFCs should be, and so you had many different DFCs. Then the legislature created the framework for DFC decision-making, outlining criteria that should be considered, the framework (9 factors) that should be considered. Johnson is concerned that when the DFC for GMA14 was set in April 2014, that decision was made without the benefit of the analysis of those nine criteria. He suspects the District does not have those nine criteria now. Therefore, an informed decision can't be made. We have been meeting with your staff to discuss a different approach for this next planning cycle. The thought that next year you can get comments based on the analysis and revise the DFC is unrealistic. I believe this board deserves the analysis that the legislature directed before you make a decision on the Desired Future Conditions. We have made presentations to your staff and consultants, and I want to thank Kathy and Brian and John and Bill for the patience they have shown with us. It's been extremely helpful to hear those comments and concerns. Hopefully you've seen what we've done/suggested. It's a middle ground. It's a pause and let's step back and in five years see how we've done. Let's say the goal is to stabilize aquifer levels for the foreseeable future instead of setting the 64,000 as our DFC. Let's just say we decide the DFC of stabilization of aquifer drawdown levels will recognize that there will be a rebound associated with the regulatory program you have in place. That recovery is going to improve the situation that Jace was talking about. If we can preserve where we are right now and relieve some of this economic pressure by finding that we can produce more water, then we have literally accomplished the goal that the legislature set out to strike the balance between conserving this resource and providing for the highest practicable level of production. We don't have a fully-formulated outline of what that DFC would look like. One option could be to adopt a rolling reduction, as the Subsidence District has. Perhaps a rolling 70/30 plan. Perhaps ten years from now, that number changes. Once this DFC is adopted, it won't change until 2020 because of inertia. Let's look at an alternative approach now. He noted that he has one quick criticism. Shenandoah asked for a simple set of model runs and got a very complex proposal back. The city wants to contribute to this understanding and help you with the information. This is the kind of information that you should be demanding, to have at your disposal as you make these decisions. Whether we finance

it or not. So I'm going to make my pitch to share the cost of that proposal between the district and the city so that we get that analysis and that you have the benefit of that analysis as you make these decisions.

Director Houston asked if we run one or more proposed scenarios and they generate an acceptable response from the aquifer, we've already been through the nine factors, how do we incorporate it? One way would be to bring it in during the public comment period. Do you have a proposal for how that happens?

Mr. Johnson acknowledged that it is a challenge, but better to start the process now rather than a year from now.

Houston noted that changing the regulatory framework would help deal with some of the struggles. From a legal standpoint, that's a level of complexity in and of itself. Johnson replied that's true, and he will volunteer his services, at Shenandoah's expense, to help.

Mr. Bleyl asked Mr. Johnson to clarify his comment of the nine criteria not yet being addressed. Mr. Mullican said he has a copy of that information, and it's available. The results were presented in March 2015. Johnson said the existing DFCs should have been evaluated using the nine criteria and then go from there.

Someone asked where the proposal came from, and General Manager Jones said it was produced by John Seifert. The cost is not to exceed approximately \$24,000.

Houston asked Mullican what it would cost to re-run the nine criteria. His response: the cost for the recently-completed one was \$126,000, so the cost would be less than that.

Houston thanked Johnson for his approach.

Mullican noted as a reminder that it takes 2/3 of the members of the GMA to make that decision. Mr. Weisinger went back to a comment that Mark Lowry made in a previous meeting – if Lone Star makes a decision on a number, which takes effect in our District. Mr. Lowry noted that is true, but you're just changing the management plan, not the GMA.

There being no further questions from the committee or the public, the meeting was adjourned at 4:45 p.m.

PASSED, APPROVED, AND ADOPTED THIS 12th DAY OF MAY, 2015.



~~M. Scott Weisinger, PG, Board Secretary~~
Samantha Reiter, Asst. Board Secretary



Findings and Review Committee Public Workshop

May 5, 2015

NAME	COMPANY/OCCUPATION	EMAIL
Tom Michael	SORA - Dir of Finance	tmichael@sjra.net
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GREG SMITH	City of Shenandoah	
AMY BEUSSINK	USGS	-
Lynette Hancock	Sen. Robert Nichols' office	



Findings and Review Committee Public Workshop

May 5, 2015

NAME	COMPANY/OCCUPATION	EMAIL
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Lone Star Groundwater
Conservation District
Findings and Review Committee
Public Workshop
May 5, 2015

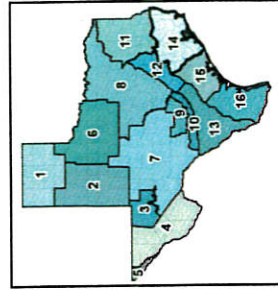
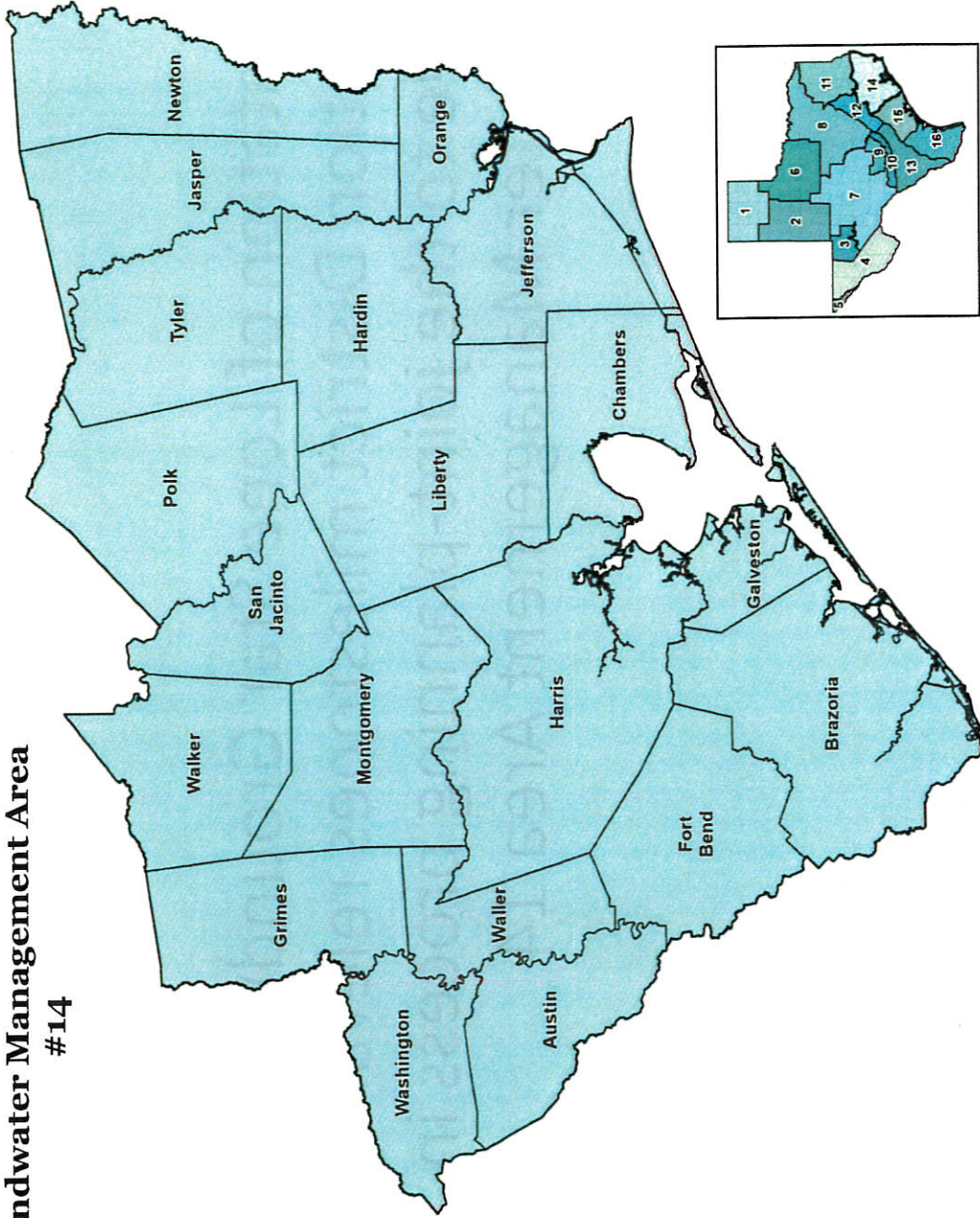


Agenda

1. Call to order
2. Introductions and overview of meeting goals
3. Presentation of Lone Star Groundwater Conservation District milestones relevant and applicable to the joint-planning process in Groundwater Management Area 14
4. Presentation on progress to date and remaining tasks for District representatives in the current round of joint-planning in Groundwater Management Area 14
5. Discussion of public participation in Groundwater Management Area 14 joint-planning efforts
6. Presentation on Lone Star Groundwater Conservation District efforts in anticipation of the next round of joint-planning in Groundwater Management Area 14 (from 2016 – 2020)
7. Receive questions and input from Workshop participants

3. Presentation of Lone Star Groundwater
Conservation District milestones relevant and
applicable to the joint-planning process in
Groundwater Management Area 14

Groundwater Management Area #14



DISCLAIMER: This map was generated by the Texas Water Development Board using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the information shown herein nor to the suitability for a particular use. The scale and location of all mapped data are approximate. Map date: JUNE 2014

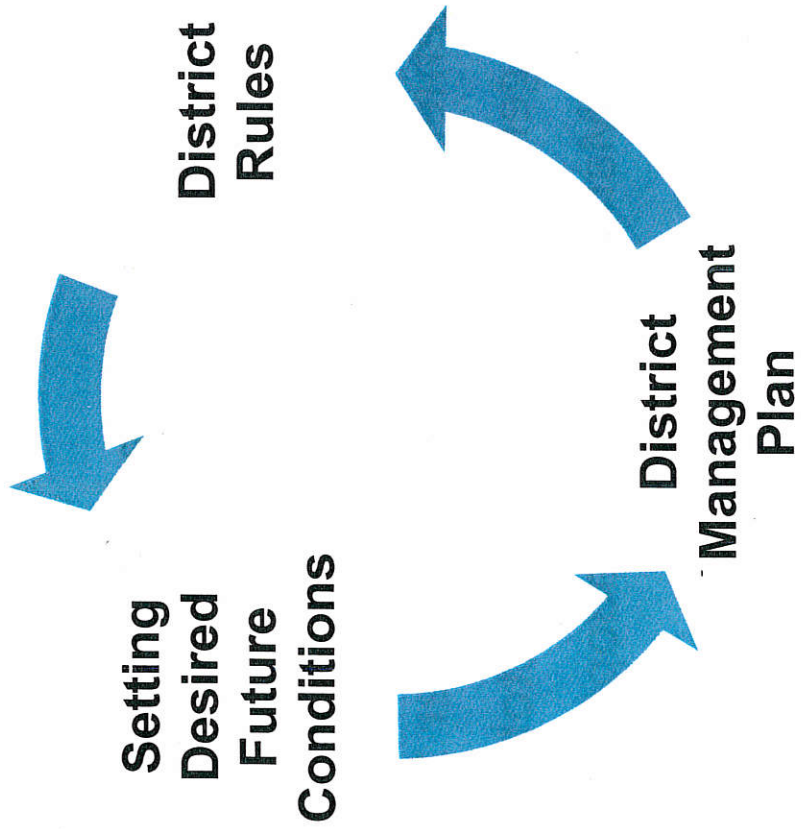
TEXAS WATER DEVELOPMENT BOARD
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Groundwater Management in Texas Water Law



LSGCD Milestones Related to GMA 14

- Lone Star Groundwater Conservation District (LSGCD) created by passage of House Bill 2362 effective September 1, 2001
- LSGCD confirmation election passed November 6, 2001, with 73.85 percent of voters supporting district creation
- First LSGCD Management Plan adopted October 14, 2003
- Second LSGCD Management Plan adopted October 14, 2008
- Current (third) LSGCD Management Plan adopted November 12, 2013

LSGCD Milestones Related to GMA 14 (cont.)

- DFCs for GMA 14 during first round of joint planning adopted August 2010.
- April 8, 2014, briefed and received consultants recommendations to continue with desired future conditions that result in an estimate of modeled available groundwater of 64,000 AFY for the Gulf Coast Aquifer in Montgomery County for GMA 14 in second round of joint planning.
- During the current round of joint planning, the LSSGCD Board has received progress reports and discussed current and future activities of GMA 14 during posted meetings on 9.14.10, 5.10.11, 6.14.11, 5.8.12, 5.14.13, 6.11.13, 7.9.13, 8.13.13, 3.11.14, 4.08.14, 6.10.14, 7.8.14, 8.7.14, and 12.9.14

Current Management Plan

Current LSGCD Management Plan, adopted November 12, 2013, after notice and hearing, includes the following desired future conditions, adopted by GMA 14 in 2010, and estimates of modeled available groundwater.

Aquifer	Drawdown (2008 - 2016)	Drawdown (2016 - 2060)
Chicot	3	6
Evangeline	13	25
Burkeville	10	23
Jasper	61	-38*

* Negative value indicates a water-level rise

Current Management Plan (cont.)

Aquifer	Year					
	2010	2020	2030	2040	2050	2060
Chicot	1,482	1,722	1,722	1,722	1,722	1,722
Evangeline	39,381	38,293	38,293	38,293	38,293	38,293
Burkeville Confining Unit	0	0	0	0	0	0
Jasper	32,401	21,614	21,614	21,614	21,614	21,614
<i>Gulf Coast Aquifer Total</i>	<i>73,264</i>	<i>61,629</i>	<i>61,629</i>	<i>61,629</i>	<i>61,629</i>	<i>61,629</i>

4. Progress to date and remaining tasks for District representatives in the current round of joint-planning in Groundwater Management Area 14

Joint Planning in GMA 14

This is the second round of joint planning following passage of House Bill 1763 in 2005.

Frist round concluded on September 1, 2010.

Current round of joint-planning from September 1, 2010 – May 1, 2016*. (note – Deliverables on deadlines changed from first round to second round of joint planning after passage of Senate Bill 660 in 2011)

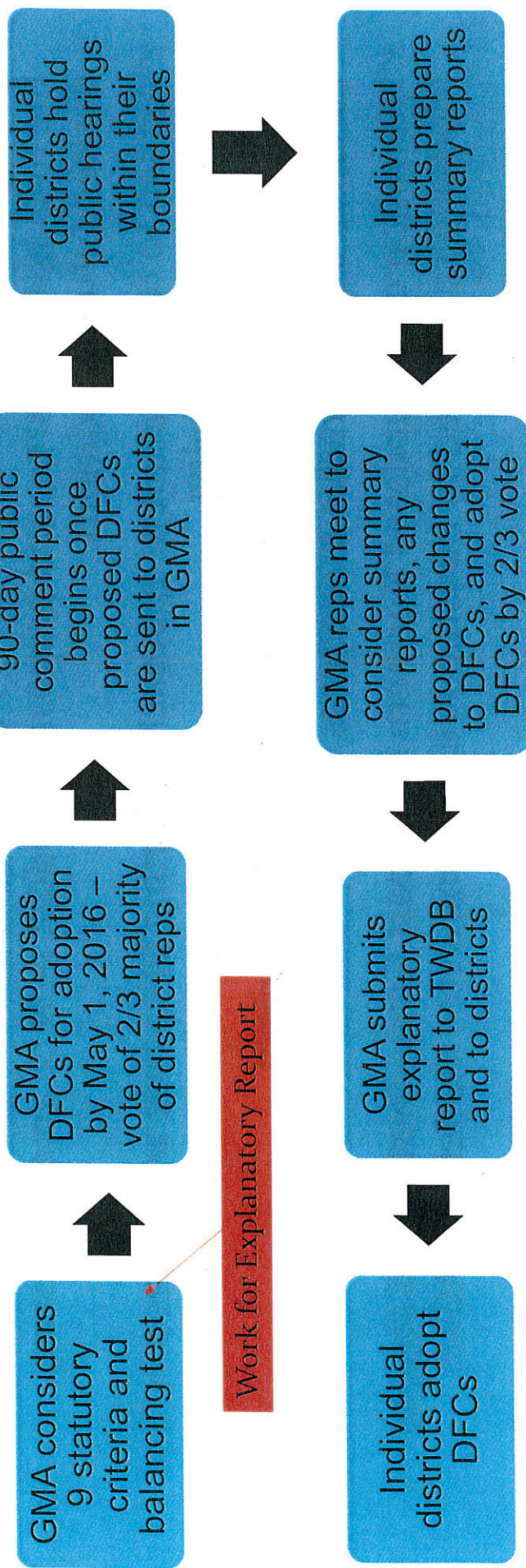
Next round of joint planning from May 1, 2016 – September 1, 2020.

The path to DFC...

During first round of joint planning:

- 1. Determine DFC**
- 2. Adopt DFC**
- 3. Send DFC to TWDB**

“New” DFC Adoption Process



Status of GMA 14 progress to date

- ✓ Met annually to conduct joint planning with the other districts in the management area and to review management plans, accomplishments of the management area, and proposals to adopt new or amend existing desired future conditions.
- ✓ Agreed to continuation of approach to setting DFCs that was utilized in first round of joint planning
- ✓ Adopted GMA 14 Joint Planning Interlocal Agreement
- ✓ Adopted administrative procedures
- ✓ Utilization of the updated Northern Gulf Coast Groundwater Availability Model (also referred to Houston Area Groundwater Model, or HAGM)

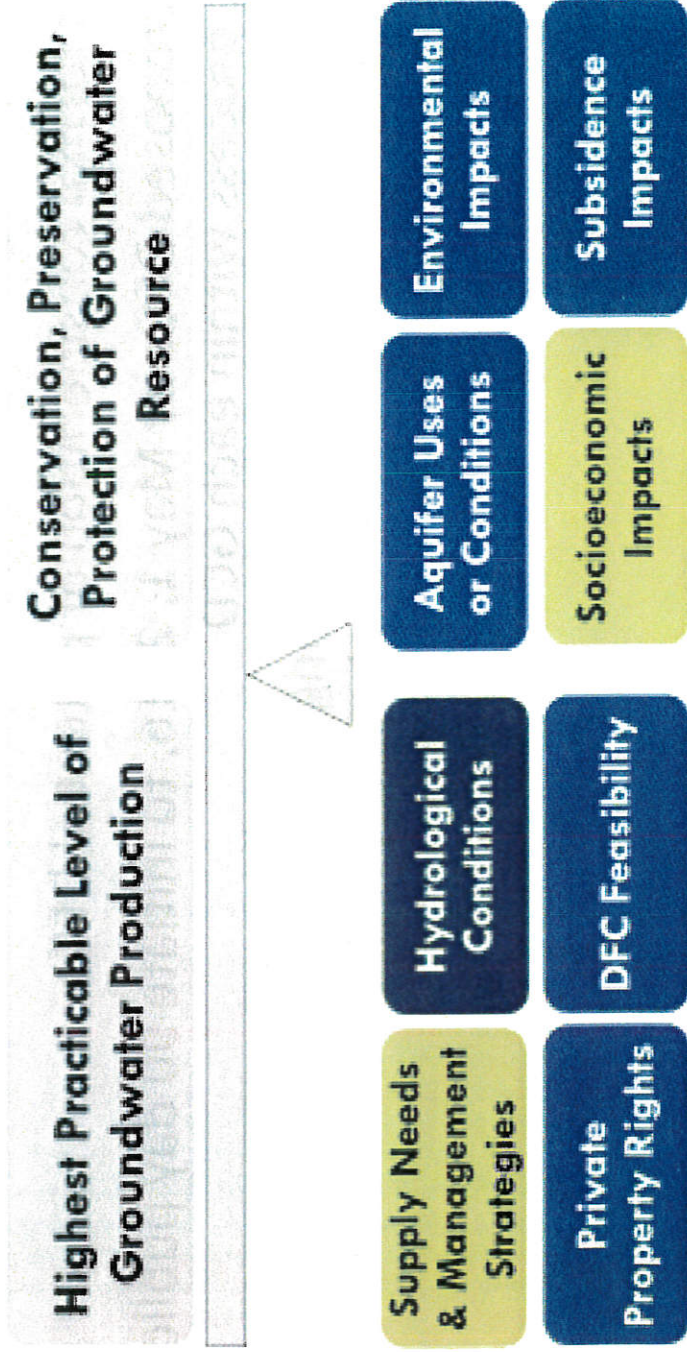
Status of GMA 14 progress to date (cont.)

- ✓ Completed preliminary considerations, based on DFCs utilized in agreed to GAM Run, of the nine factors required in TWC 36.108 (d) (1-9):
 - ✓ Aquifer uses and conditions
 - ✓ Water supply needs and strategies
 - ✓ Hydrological conditions
 - ✓ Other environmental impacts
 - ✓ Impacts on subsidence
 - ✓ Socioeconomic impacts
 - ✓ Impacts on private property
 - ✓ Feasibility of achieving DFCs
 - ✓ Other relevant factors

Next steps

- Discussion and agreement on potential DFCs for formal consideration
- Conduct formal consideration of potential DFCs
- Adopt proposed DFCs by May 1, 2016, to initiate 90 day public hearing process within each GCD
- Consider summary reports including proposals for alternative DFCs, adopt final DFCs, and prepare explanatory report

Joint Planning Process - Balance

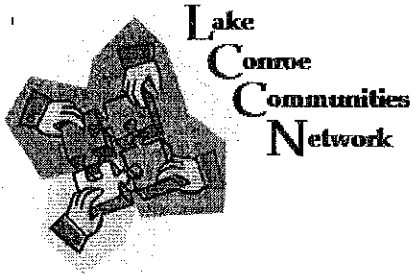


5. Discussion of public participation in Groundwater Management Area 14 joint-planning efforts

- Next meeting of GMA 14 is scheduled for May 28, 2015
- Agenda will include an opportunity from any entity/organization in GMA 14 that wishes to make a technical presentation on potential alternative DFCs to GMA 14.

6. Presentation on Lone Star Groundwater
Conservation District efforts in anticipation of the
next round of joint-planning in Groundwater
Management Area 14 (from 2016 – 2020)

7. Questions and input from Workshop participants



936-206-7172 x 101
www.LakeConroeCN.com

Input Provided at LSGCD Workshop:

Regarding Joint-Planning Process in Groundwater Management Area 14

May 5, 2015

Regulatory Induced Crisis

LCCN is deeply concerned that the current course of regulatory development¹ – both within Lone Star and propagated through the GMA 14's DFC process – seriously threatens to stifle Montgomery County's economic development potential NOW – over its critical short term window of the next 15 years.

Over the next 15 years, the county population is projected to increase by an unprecedented 400,000 and reach 1 million. The ripple effects of stifling this growth will be felt far beyond the boundaries of the county. The spectrum of core businesses that are the economic engine for the entire Greater Houston Metropolitan Area are driving Montgomery County's spectacular growth. Water is a critical and early stage resource to the planning and financing of economic development. It is highly questionable whether adequate amounts of water will be reliably available on the time sensitive schedules required throughout the next 15 years. And if it is, the early and unsustainable side effects of its production will derail the economic expansion.

For its part, LCCN is fulfilling its mission by engaging the community in this whole matter. LCCN has now launched a persistent public campaign throughout the Montgomery County community to:

- Educate everyone in our community on the facts surrounding this crisis
- Advocate on the community's behalf through a Petition signing process, the results of which will be served to Lone Star later this year (Copy of our Petition is attached here)

Consequences of Imposing Water Supply Shortage NOW

IF current regulatory development is NOT suspended, the county faces real groundwater shortages that rise steadily and relentlessly toward 100,000 ac-ft/yr² throughout the short span of next 15 years. Given the very short timeframe involved, LCCN finds Lake Conroe to be at the core of any attempt to make up for this rapidly escalating shortage. The bulk of Lake Conroe's permitted capacity of 100,000 ac-ft/yr will likely be required. The path to any pursuit of that is fraught with fundamental challenges, any one of which likely will impinge directly on the county's population ramp-up of 400,000:

¹ Capping Gulf Coast Aquifer water production by Montgomery County beginning in 2016 to 70% of 2009 rates and coincidentally setting 64,000 ac-ft/yr as the that aquifer system's replenishment rate.

² The value is an updating of Lone Star's currently published numbers for a county population of 1 million: 154,000 ac-ft/yr demand and 90,000 ac-ft/yr shortfall. The updating is based on actual groundwater production of about 100,000 ac-ft/yr in 2014 and for an actual population of about 600,000+. The update results in: 167,000 ac-ft/yr in total demand.

- Engineering challenges: The current surface water processing system (25,000 ac-ft/yr) is only 25% of what will be required. The necessary steps and the time involved in each for actually achieving expansion and delivering to rising water demand will be daunting if not impractical: planning, engineering, financing, construction, startup and shakedown.
- Economic challenges: With every step into a sourcing of the shortage with lake water, the pressure on the lake as a fundamental component of economic development and growth will increase. Given the risk averse nature of major developers and their investors/bankers, the tipping point will inevitably arise, far earlier in the 15 expansion than most want to admit today.

Except under the wettest of weather conditions, expansion of the current phase 1 capacity of the surface water system (25,000 ac-ft/yr) to meet any serious fraction of regulatory induced water supply shortages will put unsustainable pressure on the lake and on the lake's role in the economic health and development of the region.

Risk in Suspending Pending Groundwater Restrictions NOW

LCCN sees NO RISK in the suspension of pending 2016 groundwater restrictions. This becomes acutely clearer for the immediately relevant short period of the next 15 years.

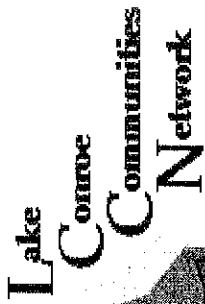
LCCN, in consultation and close coordination with its experts, has examined in great detail the basis for pending 2016 groundwater restrictions. LCCN finds logic built on false premises, an over-reliance on simulation modeling, and physical behaviors of critical observable, measurable parameters that contradict results of simulation modeling.³ Our views have not changed from those reported to the Lone Star Board in January (copied attached here). Time and further research since then only re-enforces the findings in our January report.

LCCN, in consultation and close coordination with its experts, finds that the Gulf Coast Aquifer is large, healthy and full. Field measurements and observations (in stark contrast to modeling simulations) make clear that:

- Actual Replenishment Rates: In the most recent 60+ years of large-scale, region-wide water production, replenishment rates have been sufficient to keep the Gulf Coast Aquifer full.
- Modeled Replenishment Rates: Those production rates dwarf the 64,000 ac-ft/yr rate that is at the heart of pending Lone Star pending 2016 regulations and its work with GMA 14 on DFC's.

Detailed analysis of operating data across a representative sampling the county's well systems shows vibrant, resilient behavior and no signs of stress.

³ This is no surprise to those experienced with modeling in any field. Complex simulation models, while critical to understanding a system, produce results that are only as good as their calibration with field observed and measured data. Their ability to forecast forward from any such calibration effort generally falls off rapidly with the span of the forecast because the underlying scientific phenomena involved in the system are not yet well enough understood and built into the model.



For Release at
LCCN Town Hall Meetings
April 28 & 29, 2015

Questions:
936-206-7172 x 105
www.LakeConroeCN.com

LCCN PETITION

LCCN intends to present, deliver and discuss this petition on behalf of the Greater Lake Conroe Region (GLCR) community in person to at least the following organizations:

- Board of Directors, Lone Star Groundwater Conservation District
- County Commissioners Court (4 precinct commissioners and judge)
- The five Texas Legislators with jurisdiction in the County (two senators, 3 representatives).

We, the undersigned, strongly request that the Lone Star Groundwater Conservation District suspend the January 1, 2016 implementation of its District Regulatory Plan to provide the necessary time and the resources and to insure the employment of methods that engage the full participation of the community in determinations of each the following:

1. **Separate** capacities of each of the Montgomery County aquifers to continue safely contributing to the current and growing water needs of the county;
2. **Economic** viability, practicality and sustainability of alternative sources (including county surface water, non-county surface water transfer, new groundwater and water reuse) to resolve rapidly rising shortages in water supply (100,000 acre-ft/yr by 2035) resulting from impending groundwater restrictions coupled with exploding population growth (doubling by 2035) and
3. **Role** and effectiveness that conservation can/should play in limiting use of both county surface and groundwater to that necessary for the community's sustainable economic health and development.



LCCN Petition

CAUTION: FIELDS MUST BE COMPLETE TO BE A VALID SIGNING

FIRST NAME		LAST NAME	
BUSINESS NAME (once on behalf of a business)			
POSITION OF SIGNER FOR BUSINESS			
ADDRESS [# and Street Name]		TOWN/SUBDIVISION	ZIP CODE
EMAIL ADDRESS		DATE	
SIGNATURE			



LCCN Remarks to Board of Lone Star GCD¹

January 28, 2015

As spokesman² for the Lake Conroe Communities Network (LCCN), I am here to lend support to those who are calling for a formal delay in the passage of any amendments to existing rules and regulations.

Introduction

Since 2007, LCCN has been educating, advocating for and championing the community's engagement in water resource management. In 2014 well over 500 members of our Greater Lake Conroe Region community, including many people in the audience here today, attended our election forums to hear and dialog with candidates on their views. LCCN's forums and workshops this year will engage our community in education by dialog with experts on the details, status, issues and needs surrounding water resource management. Interest and frustration with this subject continues to run very high. Accordingly, we are planning for multiple venues to accommodate what we anticipate will be participation by upwards of a thousand members of our community. My comments today reflect the knowledge LCCN has acquired and organized in preparation for this series. In its efforts, it has worked closely with experts, community managers and government representatives throughout our region, many of whom are in the audience today.

LCCN believes strongly that current rules and regulations need to be revised. However, as currently written, proposed changes:

- WILL NOT actually contribute to the health of our aquifer system;
- WILL severely damage the economic development health of the Greater Lake Conroe Region and all of Montgomery County

We see NO immediate problem or crisis that that would be exacerbated by a delay to allow responsible further discussion, real collaboration and community-wide consensus around a revised set of rules.

¹ The Rules and Bylaws Committee of the Lone Star Groundwater Conservation District (GCD) hosted a public workshop dedicated to receiving public input on the pending proposed amendments to the District Rules and District Regulatory Plan.

² Dr. Michael J. Massey, Treasurer and Director, Lake Conroe Communities Network.



Framing of Regulatory Proposals Flawed

As the GMA14 that Lone Star chairs makes clear in its Desired Future Conditions (DFC) Resolution of August 2010,

"DFC is primarily an **aquifer water-level** based approach to describe the regional local desires for the aquifers beneath them."

As a result, proposed amendments are organized around:

- Actual measurements of only the single parameter of well water levels to characterize conditions in our groundwater systems;
- Reliance on mathematical modeling for the other parameters that are required;
- Capping of aquifer water levels and water production at or near current levels for the next 50 years.

LCCN believes that this is the wrong approach and that it has led to

- Focus on problems the region does not have
- Formulation of a narrow resource management strategy that does not reflect the actual status of our groundwater water resources and their true capacity to responsibly meet the economic development needs of our region.

Targeted Problems, Urgency Misguided

Lone Star's consistent messaging since its formation in 2001 has been that Montgomery County and the entire GMA14 has, in their order of importance, two problems

- Subsidence
- Depletion

and that both are already at critical crisis levels that compel IMMEDIATE AND DRACONIAN regulatory action:

- Capping of aquifer static water well levels and
- Limiting of aquifer water production rates to a known and fixed recharge rate.

From the beginning their umbrella summary for these actions has been: regulation of the region's aquifers to their sustainable usage rate.

LCCN and everyone it has consulted with contend that Montgomery County does not have a subsidence problem and that the County's Greater Lake Conroe Region has no potential to develop one. Accordingly, well water level capping – a major longstanding component of aquifer management in the subsidence districts to the south of us – is not applicable to aquifer management in our County. Currently fully 2/3 of Montgomery County groundwater (virtually all in the Greater Lake Conroe Region) comes from deep aquifers, notably the Jasper. Virtually all population driven demands for more groundwater use



will be met from deep aquifers. Development of deep aquifers (750 to >3,000 ft) such as the Jasper pose no threat of subsidence.

LCCN and everyone it has consulted with do not see any, let alone actionable, evidence of depletion as a problem in the County's aquifer system. To the contrary, we all see a robust and healthy system blessed with enormous untapped capacity that needs to be and can be used responsibly by Montgomery County to fuel job creation and the achievement of the region's full economic development potential. Accordingly, no one sees the basis or logic for regulation that restricts production from the County's aquifers, particularly its deep aquifers like the Jasper. There is NO evidence that any measurable depletion of the Jasper aquifer has yet occurred. We have plenty of time to develop a meaningful monitoring program and establish early warning of any impending significant depletion of each of our aquifers including the Jasper. Until then, considering the enormous negative impacts on economic development, no action to control aquifer use is justified.

Fears Regarding Usable Storage and Recharge Unfounded

Despite steadily increasing evidence to the contrary over the years and without specific peer reviewable counter evidence of its own, Lone Star has taken and held firmly to the position that:

- Safely useable component of our aquifer system is extremely small (< 0.5%),
- Current usage is already stressing that usable component of the system;
- Sustainability requires that future usage be capped at fixed rates claimed to be the replenishment or recharge rates of the aquifer system.

LCCN and everyone it has consulted with finds Lone Star's position seriously if not fatally flawed. And the scale of its negative impact on the availability of the true capacity of the County's aquifer system has in no way been properly measured and accounted for.

Responsible evidence is now overwhelming that current, usable Jasper water storage under Montgomery County conservatively exceeds by a factor of at least 50 any reasonable 20 year projection of future, unregulated groundwater production. And until there is a measurable and monitored evidence of downward movement in aquifer outcropping water levels, there is no evidence to suggest that any actionable imbalance has yet occurred or will develop in the future between continued, unrestricted aquifer production and natural recharge. Only a permanent, well-conceived long term program of aquifer outcrop zone monitoring and analysis will provide the evidence first to assert a stress and then to define a meaningful regulatory response.

Interpretations/Fears of Declining Well Water Levels Misguided

Lone Star relies on static water level data from the USGS for its monitoring of the health of aquifer well systems. It interprets clear long-term downward trends in water levels across the County's well systems as evidence of stress and the unsustainability of current let alone a future that would involve expansions of current production operations.



LCCN, and everyone else it has consulted, finds reliance on a single parameter for assessments and control of well and aquifer operations at best misguided at worst fraught with the potential for completely erroneous conclusions. In its research for its education series, LCCN recently collaborated with the City of Conroe – it operates the largest Jasper aquifer based well system in the County – and with Walden’s MUD 8 to gather and analyze operating data on an expanded set of parameters that more realistically would enable assessment of the health and safe and practical expandability of their well systems. In addition to static well water levels, these data included water production data, drilled maximum operating well water level potential and estimated maximum potential well production depth should revamping of current well depths be justified in the future. Results make clear that the region’s major well systems:

- Are operating robustly, reliably and with resilience, with no signs of operating stress at current water levels of about 350 to 450 ft
- Have the existing bored well capability to double and in some cases nearly triple current operating water depths in response to steadily rising needs for increased water production
- Have total productive aquifer depths that would support revamping of existing wells to further expand maximum operating depths.

In effect, there is no evidence that either current well water operating depths or continued major expansions those depths to meet rising County water demand pose ANY threats to the safe and responsible use of the County’s aquifer system. Lone Star needs to expand its operating parameters and analyses to form a more meaningful well system and aquifer monitoring program and refrain from proposing regulations until there is clear evidence of the stress that calls for and that regulation will specifically resolve.