UPPER GULF COAST AQUIFER PLANNING AREA
(GMA 14)

Joint Planning Group Meeting

Wednesday, April 29, 2020
10:00 AM

MEETING MINUTES

A regular meeting of GMA 14 was held Wednesday, April 29, 2020, at 10:00 AM, via audio and video conference call pursuant to Texas Government Code, Section 551.125, and as modified by the Governor of Texas who ordered suspension of various provisions of the Open Meetings Act, Chapter 551, Government Code, effective March 16, 2020, in accordance with the Texas Disaster Act of 1975 (see the Governor's proclamation on March 13, 2020, certifying that the COVID-19 pandemic poses an imminent threat of disaster and declaring a state of disaster for all counties in Texas).

Agenda Items 1 and 2

The meeting was called to order by John Martin (Southeast Texas GCD) at 10:03 AM. Districts represented included: Zach Holland, Bluebonnet GCD, Samantha Reiter, Lone Star GCD, Gary Ashmore, Lower Trinity GCD and John Martin, Southeast Texas GCD. Interlocal Agreement Participants included: Pudge Willcox, Chambers County; Robert Thompson, Fort Bend Subsidence District; and Mike Turco, Harris-Galveston Subsidence District. Also, in attendance at the meeting were Larry French, Texas Water Development Board (TWDB); Wade Oliver, Intera, Inc.; and members of the public. (*see* ***Attachment "A" for a list of attendees***).

Agenda Item 3

Mr. Martin called for and opened the floor to public comment. Mr. Martin noted several comments had been submitted prior to the meeting. If the individual were not present on the call, Mr. Martin would read the written comments into the record on their behalf.

Edmund Chapman, President of Grogan's Mill Village Association, submitted written comments related to opposition of LSGCD proposals read into the record by Mr. Martin (*see* ***Attachment "B" for Chapman Comments***).

John Yoars, The Woodlands resident and Director of Montgomery County MUD 36, provided comments related to opposition of LSGCD proposals and provided written comments for the record (*see* ***Attachment "C" for Yoars Comments***).

Ron Kelling, Deputy General Manager for the San Jacinto River Authority, provided comments related to opposition of LSGCD proposals and provided written comments for the record (*see* ***Attachment "D" for Kelling Comments***).

Laura Norton, representing MUD 47 and President of LauraNorton.com, provided comments regarding Montgomery County utilizing the surface water treatment plant.

Penny Bradshaw, resident of The Woodlands, provided comments related to opposition of LSGCD proposals and provided written comments for the record (*see* ***Attachment "E" for Bradshaw Comments***).

Suellen Myers, resident of The Woodlands, provided comments related to opposition of LSGCD proposals and provided written comments for the record (*see* ***Attachment "F" for Myers Comments***).

Glenna Sloan, resident of The Woodlands, asked Mr. Martin to read her written comments related to protecting groundwater and considering all users present and future for the record (*see* ***Attachment "G" for Sloan Comments***).

George Newman, Director for Montgomery County MUD 46, was present on the call but did not respond when recognized. Mr. Martin read his written comments related to opposition of LSGCD proposals into the record (*see* ***Attachment "H" for Newman Comments***).

Dr. Gerard Gaynor, resident of The Woodlands, provided written comments related to opposition of LSGCD proposals read by Mr. Martin for the record (*see* ***Attachment "I" for Gaynor Comments***).

Tom Michel, former employee of the Subsidence District and current employee of San Jacinto River Authority, asked for thoughts and prayers for Ron Neighbors, an intricately involved and highly respected career in water and water planning for our region and the state, as he and his family deal with his recent medical diagnosis.

Bob Lux, resident of The Woodlands, provided comments related to LSGCD proposals and provided written comments for the record (*see* ***Attachment "J" for Lux Comments***).

Agenda Items 4 and 5

Mr. Martin proceeded with requests for and receipt of posted notices from District Representatives. Mr. Martin then asked for consideration of the approval of the minutes from the GMA 14 meeting on February 24, 2020. After discussion and upon a motion by Ms. Reiter, seconded by Mr. Ashmore, the minutes for the February 24, 2020 meeting were approved unanimously.

Agenda Item 6

Mr. Martin called for an update from the Texas Water Development Board and discussion of items of interest to the GMA. Mr. French recognized Ms. Natalie Ballew and Mr. Robert Bradley of TWDB as also being present. Mr. French provided general information from TWDB, including updates on modeling team work with USGS on the HAGM update and a May 20, 2020 Stakeholder Meeting; management plan reviews and the reviewing and approving of Regional Water Planning Group's Initially Prepared Plans; and an update on the Northern Carrizo-Wilcox model nearing completion.

Meeting convened as a meeting of the GMA 14 Joint Planning Interlocal Agreement Participants.
The GMA 14 Joint Planning Interlocal Agreement Participants meeting was called to order at 10:41 AM.

Agenda Item 7

Mr. Martin called for a presentation and discussion by districts or Interlocal Agreement Participants of recent activities of interest to or impacting the GMA 14 planning group. Mr. Holland noted a NOAA-funded research study by the Department of Geography & Environmental Sustainability at the University of Oklahoma. Davis Manshardt, a graduate student, had contacted him regarding contact information for area water utility operators and planners to participate in the study (*see* ***Attachment "K" for Study Invitation Gliedt DGES 2020***). Mr. Turco noted the stakeholder meeting previously mentioned by Mr. French is the meeting rescheduled from March 31, 2020.

Agenda Item 8

Mr. Martin called for discussion and possible action regarding modeling approaches and results. Mr. Oliver provided a presentation "Desired Future Condition Metrics and Modeling Results" (*see* ***Attachment "L" for Intera presentation***). Mr. Oliver outlined the efforts completed to date and where we build advancing from this point. Mr. Oliver restated the definition of available drawdown being tied to the percentage of the well column present. Mr. Oliver discussed choosing meaningful metrics to establish DFC, single and multiple metric DFCs, and linking DFC coverage and how directly the DFC can be monitored. The limiting factors vary across the GMA such as impacts to wells, subsidence, expected demand for water because aquifer uses and conditions, hydrological conditions, subsidence risk, etc. vary across the GMA. A single metric DFC is OK as it can account for varying aquifer conditions, addresses the local balancing test criteria, however it can be difficult to explain why there are differences between DFCs. Another way to address the different limiting factors is to use multiple metrics in the DFC statement. A multiple metric DFC has potential benefits of consistent DFCs throughout GMA while accounting for local differences in conditions, both process and result directly address the

statutory factors, and process has less direct link to the existing pumping distribution or the reverse engineering argument. Potential drawbacks are that a District must monitor more than one aquifer characteristic to demonstrate compliance with DFC and it is new approach to the extent new is a complication. Mr. Oliver demonstrated each county's results for the multiple metric DFC approach and the highlighted limiting factor(s) for each county driving water availability. Mr. Afinowicz, on behalf of Brazoria County GCD, noted Brazoria County would work and coordinate with Mr. Oliver to address the issues presented in relation to the metrics. Mr. Turco noted a GMA-wide DFC may not be attainable due to diversity of conditions. Mr. Oliver agreed but the effort to define such a DFC and failing would highlight the limitations and provide justification to the DFCs approved. Mr. Beach, Lone Star GCD consultant, confirmed the nine simulations were run on the metrics and parameters stated and the results provided were of each county, noting if one county changed a parameter it would impact other counties. Mr. Keester, Lone Star GCD consultant, confirmed the percent available drawdown remaining was a median not an average expression. Mr. Holland asked why average subsidence was used and not maximum subsidence. Mr. Oliver noted maximum subsidence would tie impacts to a single model cell and average subsidence would provide a broader scope to analyze the scope of the limiting impact.

Agenda Item 9

Mr. Martin called for discussion and possible action regarding the DFCs, and the path forward for GMA 14 to accomplish statutory mandates for Round 3 Joint Planning. Mr. Oliver outlined the point in the process is to choose one or more runs to consider and review the balancing test and develop DFCs, setting the bar for evaluation of the criteria factors.

Mr. Martin recognized Ms. Reiter to provide a presentation on behalf of Lone Star GCD. Ms. Reiter began with a statement on where Lone Star GCD has come from and where it is going (*see* ***Attachment "M" for LSGCD statement***). Mr. Thornhill, Lone Star GCD consultant, began the presentation (*see* ***Attachment "N" for LSGCD presentation***). LSGCD key considerations are manage common groundwater reservoirs/subdivisions within the management area, provide every groundwater owner opportunity for "fair share", balance conservation and development of groundwater resources, and provide best current estimates of groundwater availability under the management standards (i.e., DFCs). Mr. Thornhill noted this process was loosely outlined March 2019, detailed more in November where discussion identified areas of the approach that needed to be changed to not offend regional planning process, and in February 2020 reported on the work that has been done with respect to current and future uses and strategies of the resources. This review and procedure provided these alternative runs that demonstrate DFCs and result a version of MAG. Mr. Thornhill emphasized the process is as important, or more important, than the result meaning the MAG. The process to select potential DFCs should be an aquifer condition not pumping amount or distribution, measurable in real life at monitoring sites, can be selected prior to or independent of any model runs, and the process should be applicable in other aquifers and areas. Mr. Holland clarified the current process and approach of the GMA which, is

reflective and responsive to the issues facing the GMA, have not been discussed by the Lone Star GCD Board. Ms. Reiter reiterated Lone Star GCD would prefer one of their proposed runs for GMA consideration but would review any considerations before the GMA.

Mr. Keester outlined the modeling efforts behind the approach and scenarios presented. The purpose of the recent modeling was to determine potential MAG associated with DFC options. This modeling would optimize potential MAG (start with Run D pumping distribution, increase/decrease to meet DFC option), results remain subject to model limitations (boundary conditions, non-convertible storage properties), and potential MAG will vary with different modeling assumptions (starting pumping distribution, multiplier locations, observation locations and weighting). The conclusions showed modeling assumptions affect results, DFC statement can be simple, and the process considers conditions across GMA 14. Mr. Beach highlighted the Lone Star GCD weighting of the nine statutory factors to be considered in DFC development ranking private property rights highest, the debate of subsidence impacts tied to the HAGM as the best available science, and relevant socioeconomic impacts which are greater than what have been discussed or presented at the Board meeting referenced by commenters. Ms. Reiter summarized Lone Star GCDs request for one of their scenarios to be considered as one of the contracted model runs. She noted Run D had commitment and was unanimously approved by the GMA to begin discussions on this round of planning and had substantial Montgomery County permittee support including the San Jacinto River Authority as a previous board member helped with develop and review.

Mr. Turco clarified the difference in definition of available drawdown between Mr. Oliver's presentation and the Lone Star GCD presentation. Mr. Holland asked to recognize Dr. Bill Hutchison. Dr. Hutchison, Bluebonnet GCD consultant, asked about the model constraints of these results presented as they seem to simulate Mr. Oliver's results with no constraint or parameter stated. Mr. Keester stated a 50% reduction in remaining available drawdown in relation to the top of the aquifer from Run D as a baseline for Run 1. Dr. Hutchison asked about the optimization of pumping in the Jasper and the known limitation of Jasper subsidence in the model expressed during the review of the HAGM by Mr. Thornhill. Dr. Hutchison stated it could be argued since the results and process are silent on the limitations of the model this optimization is an exploitation of the model limitations so the subsidence isn't triggered with pumping increases. Mr. Thornhill stated the MAG will change due to model changes and the HAGM is the tool we are to use. Mr. Keester stated we must address subsidence as it is modeled through this process and a limitation and consideration of all runs.

Mr. Turco suggested to review and digest the information provided to provide the opportunity to be deliberate in our decisions of identifying runs. Mr. Holland requested simulations within the confines of the multiple metric scenario to identify a solution for Brazoria County discussed earlier. Ms. Reiter requested to discuss the base pumping file utilizing the 2016 DFCs due to past legal issues. Mr. Holland requested the maximum subsidence data associated with Mr. Oliver's

presentation. Mr. Martin noted discussion and possible action to select model scenarios to be run would be further discussed at the next meeting.

With no further comments from the participants, Mr. Martin adjourned the meeting of the GMA 14 Interlocal Agreement Participants and reconvening the Joint Planning Group meeting at 1:07 PM.

Meeting of the GMA 14 Joint Planning Interlocal Agreement Participants adjourned.

Agenda Item 10

Mr. Martin reconvened the GMA 14 meeting and called for discussion of next meeting date, location, and agenda items. The next meeting was set for May 29, 2020 at 9:00 AM to be held via Webex or at the offices of the Harris-Galveston Subsidence District, located at 1660 W. Bay Area Blvd., Friendswood, Texas 77546.

Agenda Item 11

Without further discussion or comment and there being no further business, the meeting was adjourned at 1:17 PM.

PASSED, APPROVED, AND ADOPTED THIS 29 day of May, 2020

John M Martin

Chairman

ATTEST:

Secretary