

Item 4 – Discussion on MAG Peak Factor use by Region G Water Planning Group

Future groundwater projects proposed within the District must be vetted by the Region G Water Planning Group (RGWPG) in order to be placed in the State Water Plan and be eligible for SWIFT funding. Proposed projects cannot exceed the Modeled Available Groundwater (MAG) estimate established for the county in which the pumping will occur.

To that end, if the estimated pumping will exceed the MAG over the planned pumping horizon, the Texas Water Development Board (TWDB) has new rules to allow consideration of the project using a MAG Peak Factor rather than summarily dismissing the project as ineligible.

I have included several slides detailing how groundwater availability is determined and how the MAG Peak Factor can be utilized. As you will note, inherent in this process is the approval of the affected groundwater district and the Groundwater Management Area representatives.

The MAG Peak Factor is a needed step forward to allow consideration of projects that would otherwise be determined as ineligible. Before the MAG Peak Factor, BGRWG was required by statute to use the MAG as a hard cap. BVGCD does not use the MAG as a hard cap on permitting, but instead uses the desired future condition to manage the aquifer of origin. MAG Peak Factor will allow the District to partner with BGRWG and the entity proposing the project to adequately vet the pumping over the anticipated project horizon.

I am asking the Board to be proactive and develop a MAG Peak Factor percentage for each of the aquifers. In order to make this happen, I propose to:

- Solicit from each of the public water suppliers in the District plans for future water projects
- Compile the projects and send them to LBG-Guyton for review
- LBG-Guyton would recommend a MAG Peak Factor for each of the aquifers following model run simulations
- Recommendations for MAG Peak Factors would be brought to the Board for consideration/approval at the May 11th Board Meeting

I have received information from pertinent stakeholders. The information was sent to LBG-Guyton for model simulation runs and recommendations. Presentation of the model simulation runs and the resulting recommendation are in the following presentation.

Modeled Available Groundwater (MAG) Peak Factor



Presented to
BVGCD Board of Directors
By
LBG-Guyton Associates



June 8, 2017

BACKGROUND

- ❖ New concept in groundwater management planning administered by the TWDB;
- ❖ provides reasonable flexibility and temporary accommodation of increased groundwater pumping above the MAG;
- ❖ can accommodate anticipated fluctuations in pumping between wet and dry periods, or to account for other shifts in the timing of pumping while remaining consistent with desired future conditions;

BACKGROUND(cont'd)

- ❖ allows regional water planning groups to develop plans that reflect more realistic drought condition groundwater availability and pumping, where appropriate; and
- ❖ maintains the integrity of the regional and state water planning process.

MAG Peak Factor Considerations

Its potential use will depend on a combination of many factors including:

- ❖ the character of the aquifer;
- ❖ specific pumping locations;
- ❖ historical and anticipated future pumping volumes – including relative to the MAG; and
- ❖ historic and estimated future pumping patterns

Requirements for Use of Proposed MAG Peak Factor

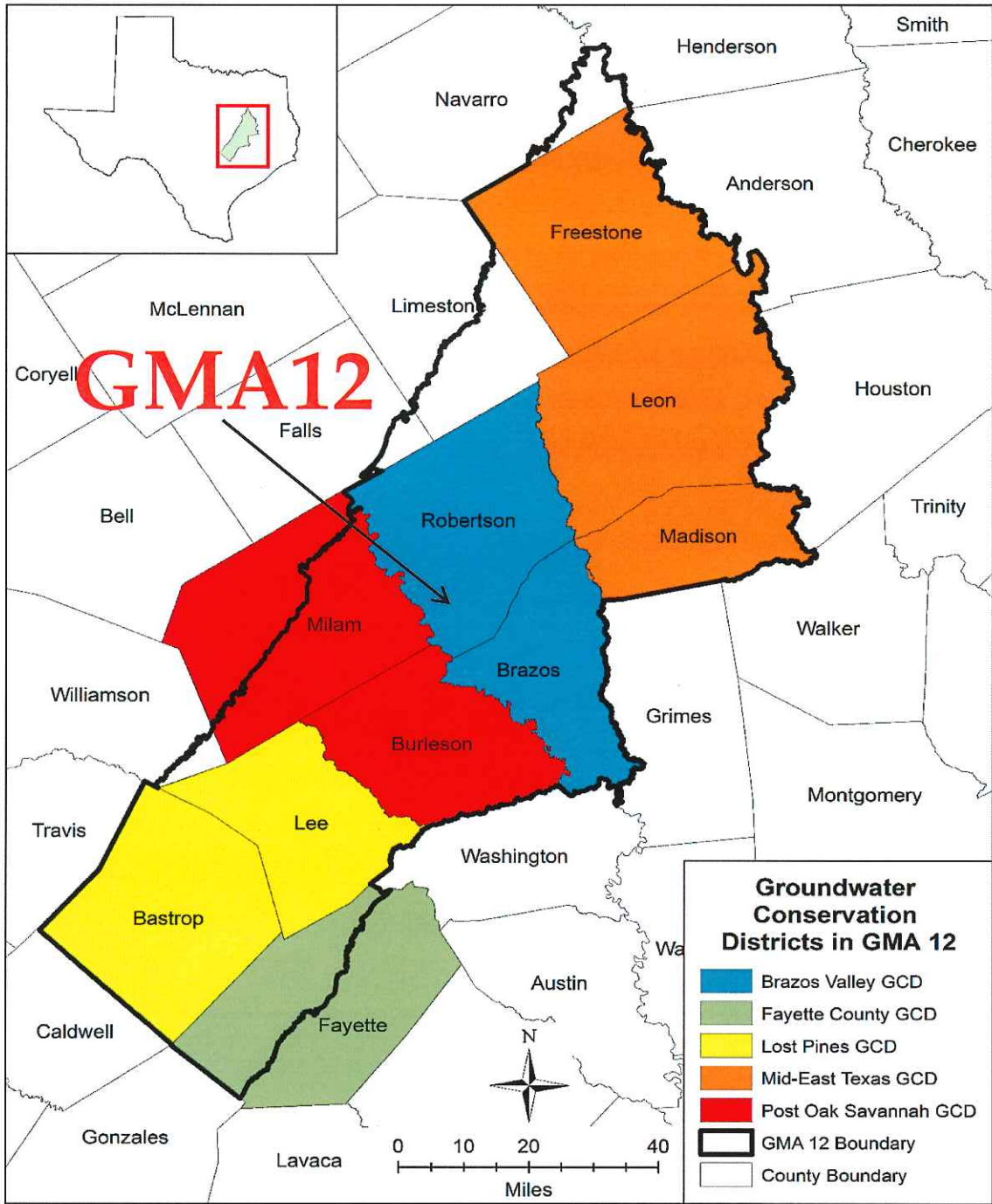
- ❖ Provide technical basis for the request in sufficient detail to support the request
- ❖ Document how the MAG Peak Factor will not cause adjoining groundwater conservation districts to exceed their desired future conditions

Requirements for Use of Proposed MAG Peak Factor

❖ Approvals by:

- Relevant groundwater conservation districts
- Groundwater Management Areas
- TWDB Executive Administrator

Groundwater Conservation Districts in GMA12



Simsboro Aquifer Average Drawdown 2000-2070, ft

| | GMA 12 DFCs | Cycle Pumping Scenario ¹⁾ | Recharge Withdrawal Scenario ²⁾ | 6,000 ac-ft/yr Withdrawal 5 Years Scenario ³⁾ |
|---------------|----------------|--|--|---|
| BVGCD | 295 | 297 | 297 | 297 |
| Brazos Co. | 361 | 361 | 359 | 361 |
| Robertson Co. | 250 | 250 | 251 | 250 |
| POSGCD | 318 | 318 | 318 | 318 |
| METGCD | 138 | 139 | 138 | 138 |

- 1) Pumping additional 5,280 ac-ft/yr for three years followed by three years of pumping 5,280 ac-ft/yr less than MAG. Cycle continues for 30 years 2020-2049.
- 2) Pumping and then injecting groundwater about four miles downdip.
 - 2020-2039 2,841 ac-ft/yr
 - 2040-2049 3,917 ac-ft/yr
 - 2050-2070 5,581 ac-ft/yr
- 3) Pumping extra 6,000 ac-ft/yr from 2025 to 2030.