Proposed Desired Future Condition(s) for Aquifer(s) in GMA 12

Contact Information

Name: Steve Box, Executive Director _____

Address: P.O. Box 1423, Bastrop, TX 78602_____

_____

Phone: 512-300-6609 _____

Email: Steve.Box@att.net _____

Representing: Environmental Stewardship _____

Proposed Desired Future Condition(s)

Please be as detailed as possible in describing your proposed DFC. Include the quantifiable value and a description of the method for measuring or calculating the value. Attach additional pages as needed.

Aquifer	Proposed DFC and Measuring/Calculating Method

Aquifer	Proposed DFC and Measuring/Calculating Method

Consideration of Proposed Desired Future Condition(s)

The Texas Water code requires that the GMA develop DFCs that "provide a balance between the highest practicable level of groundwater production and the conservation, preservation, protection, recharging, and prevention of waste of groundwater and control of subsidence in the management area." In the space below, or on additional attached pages, please provide your considerations with regard to the nine items that must be considered, per the Texas Water Code, for the proposed DFC(s).

Consideration 1 – "Aquifer uses or conditions within the management area, including conditions that differ substantially from one geographic area to another:" _____

_____

_____

_____

_____

_____

_____

Consideration 2 – "The water supply needs and water management strategies included in the state water plan:" _____

Consideration 3 – "Hydrological conditions, including for each aquifer in the management area the total estimated recoverable storage as provided by the executive administrator, and the average annual recharge, inflows, and discharge:"

Environmental Stewardship requests that, in presenting this information for discussion at the May 28th meeting (as agreed in the April meeting) these data be presented for run PS4 in the context of a full water budget at ten year intervals for the current planning period through 2070. We are requesting the use of run PS4 because this is the run that the GMA is using to orient to our current and potential future conditions, not that we expect this to be the new adopted DFC.

We request that you use, as the basis for developing and presenting a water budget for GMA-12, the approach and factors presented by Bill Hutchison, Director, Groundwater Resources to the Lost Pines GCD on November 18 2009 (PPT presentation is available from that presentation through ES or LPGCD). Please use the data from that presentation to develop and present a "Pre-DFC" modeling period from 1980-1999 (three periods 1980, 1990, and 1999) to help establish a point of reference for the dynamic changes due to pumping that should be defined with the modeling analysis of the "DFC years" 2010-2070 (see also ES presentation on June 27, 2014, Exhibit 3, slide 35 for sample water budget). We recognize that this pre-DFC period does not represent a "pre-development" period as discussed in Hutchison's presentation. The dynamic changes due to pumping are demonstrated in Hutchison slides 63-95 and summarized in slides 96-102).

Using the Hutchison model as describe in slides 37-60 of his presentation (and summarized in slide 61), we would anticipate that the budget data would include the following:

INFLOWS: Recharge from precipitation cross-formational flow, reservoir leakage, and stream leakage.

OUTFLOWS: Pumping, surface water (stream leakage), evapotranspiration, springs (drains), and cross-formational flow.

STORAGE CHANGE:

To the extent possible, we would request that the GMA-12 water budgets incorporate the results of the Colorado River MODFLOW analyses run by Environmental Stewardship and provided to GMA-12 during the past and current planning periods. As an option, we would request that GMA-12 run such MODFLOW analyses for use in future discussions on the environmental and surface water impacts of permitted and proposed pumping on both the Colorado and Brazos rivers. We recognize there are limits to the use of this information, however, we have demonstrated through studies conducted for Environmental Stewardship by George Rice and provided to GMA-12 that the trends predicted by these analyses are reliable and therefore are useful in anticipating and evaluating impacts due to pumping.

Consideration 4 – "Other environmental impacts, including impacts on spring flow and other interactions between groundwater and surface water:"

Consideration 5 – "The impact on subsidence:"

Consideration 6 – "Socioeconomic impacts reasonably expected to occur:" _____

Consideration 7 – "The impact on the interests and rights in private property, including ownership and the rights of management area landowners and their lessees and assigns in groundwater:" _____

Consideration 8 – "The feasibility of achieving the desired future condition:" _____

Consideration 9 – "Any other information relevant to the specific desired future conditions:"

Environmental Stewardship respectfully requests that other documents provided to GMA-12 prior to this "form" be included in the record and be considered in your deliberations regarding the current review of the desired future conditions.

Specifically citing:

ES presentation on June 27, 2014 which included a powerpoint presentation, list of references, and copies of selected documents, all of which were provided to GMA-12.

ES letter and attachments dated March 27, 2015.