Prepared Remarks
Lost Pines GCD Hearing on the LCRA Griffith Ranch Application
September 26, 2018

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Environmental Stewardship has requested a contested case hearing on the LCRA application. We base our request in part on a scientific study conducted for us by hydrologist, George Rice. The study demonstrates that the LCRA's pumping in the Simsboro aquifer will negatively impact formations other than the Simsboro — including the Calvert Bluff and Hooper aquifers — and will negatively impact the flow of the Colorado River. Mr. Rice used the GMA-12 Groundwater Availability Model (GAM) and a pumping file provided by the Lost Pines GCD. The GAM used was developed by the State of Texas using the best available science at the time. It is the GAM that has been used, along with other information, in considering the impacts of groundwater pumping and in establishing desired future conditions.

Environmental Stewardship is concerned that predicted drawdown of the Calvert Bluff and Hooper Aquifers will not only impact shallow domestic wells in these aquifers but will also have adverse affects on the surface waters, and the terrestrial plants and animals associated with these aquifers. This includes the Lost Pines Forest, Houston Toad and many fish and wildlife habitats registered for wildlife tax exemptions.

The Rice report predicts that there is a trend toward lowering the flow in the Colorado River and its tributaries that will be especially harmful to both the streams and associated terrestrial habitats during drought and extreme drought conditions such as experience during the recent 2011 drought. During drought and extreme drought, when rainfall and surface-water runoff into the streams and rivers are essentially non-existent, the Colorado River and its tributaries must rely on releases from the Highland Lakes, return flows, and groundwater inflows for their existence. The model predicts that groundwater flows into the river and tributaries will be greatly reduced over the 50-year planning period. As a result, river and stream flows will be highly reliant on groundwater inflows at a time when Highland Lake releases and return flows are most restricted.

The state of Texas has established environmental flow standards for the Colorado River that include "subsistence flows" that are critical to the survival of aquatic species during drought. These are flows that ensure aquatic life survives the drought so that it can repopulate the river when wet conditions return. These environmental flows also provide "threshold" freshwater inflows to Matagorda Bay to keep the bay healthy. Reduced outflows from the Simsboro, Calvert Bluff and Hooper aquifers will put subsistence flows at risk unless very carefully monitored and managed.

Environmental Stewardship is concerned that the LCRA pumping, as predicted by the GAM, along with other permitted pumping will contribute to the demise of the Colorado River in the lower basin as has occurred in its tributary, the San Saba River, in the upper basin. To avoid this demise, we need to heed the trends predicted by the GAM and take affirmative actions to better understand and protect these irreplaceable resources.

Fortunately, the District now has a key tool to take the steps necessary in developing the scientific information needed to better inform the decisions this Board is about to make regarding these issues as they relate to this permit application.

To demonstrate, let me read from the evaluation of the LCRA's proposed pumping on surface water resources from the District's review of the LCRA permit application packet. To quote:

> *A quantitative evaluation of the impact of the proposed pumpage on surface water resources within the District is difficult to make. The only quantitative tool available for*

such a calculation is the GAM, which is not well suited to accurately evaluate impacts to surface water within the District attributable to this application.

Though the current GAM *is not* well suited to quantitatively evaluate the impacts to surface waters, it *is* well suited to indicate trends. However, since the District's consultant did not present the District with that information in his report, we commissioned the work and look forward to presenting the study as evidence in the upcoming hearings.

Here is what the Rice report says:

> *... the GAM does not accurately predict the effects of pumping on the amount of groundwater discharged to the Colorado River. It does, however, reliably predict the trends in groundwater discharge resulting from pumping.*
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> *LCRA's proposed pumping would reduce groundwater discharge to the Colorado River, thereby reducing the amount of water flowing in the river.*
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> *It is possible that the reduction in flow caused by LCRA pumping would contribute to a reversal of the hydraulic relationship between the Colorado River and the Carrizo Wilcox aquifers. That is, LCRA's pumping, together with baseline pumping and other proposed pumping projects (e.g., End Op, Forestar), could result in the Colorado changing from a stream that gains water from the aquifers, to a stream that loses water to the aquifers.*

To address the deficiencies in the current GAM, several of the groundwater districts in GMA-12, LCRA, Brazos River Authority, and the Colorado-Lavaca Basin and Bay Stakeholder Committee funded improvements to the GMA-12 GAM to make it more reliable in predicting the impacts of groundwater pumping on the Colorado and Brazos Rivers and their tributaries. As such, the IMPROVED GAM should provide the sciences needed to better evaluate the trends that are indicated in order to better inform decisions regarding how to manage the groundwater resources in a way to protect these surface waters. The Texas Water Development Board, through its contractor INTERA, has recently completed work on the Improved GAM and it is now available for use.

As Carlos Rubenstein, a former Rio Grand Watermaster, commissioner at TCEQ, and Chairman of the TWDB, stated in recent testimony to the House Natural Resources Committee (attached):

> *[W]e must improve cooperation and communications among river authorities, GCDs, and the TWDB to improve the simulation of SW-GW interaction. Such interactions recently occurred with updating the GMA-12 Carrizo-Wilcox GAM. This jointly funded project clearly shows that proper modeling of SW-GW interactions is a concern and an interest for both river authorities and GCDs.*

With this initiative already underway, we have the opportunity to use the *updated* GAM to evaluate the trends indicated by the *current* GAM. ES urges that the District and the LCRA to continue the cooperation that has been exhibited in upgrading the GAM.

ES' Request: As such we request that the District and LCRA use the recently updated GAM to evaluate the impact of the requested LCRA pumping as the Board considers the impacts of pumping on the Colorado River, the Calvert Bluff and Hooper aquifers, and registered domestic wells as required by Section 36.113 (d)(2) of the Texas Water Code. Such cooperation will ultimately benefit the river, the aquifers, the District, the LCRA and our region.