

Dear Con Mims,

The Texas Parks and Wildlife Department appreciates the opportunity to comment on the Region L Draft Reports entitled “Lower Guadalupe Water Supply Project for GBRA Needs” and “Brackish Groundwater Supply Evaluation.”

TPWD staff would like to offer the following comments on “Study 1 Lower Guadalupe Water Supply Project for GBRA Needs”

Pages ES-3 and 6: Please expand the description of the pro-rata share calculation.

All Scenarios: Please describe the quantity of water that is expected to evaporate from the off-channel reservoir. It appears that the off-channel reservoir will be full most of the time and rarely used in Scenario 1. It would be helpful to know the ratio of water evaporated to water used to understand the efficiency of this portion of the project. In addition, please add a discussion in Section 3 “Environmental Issues” of impacts associated with the off-channel reservoir mentioned under Scenarios 1, 2, and 3. While off-channel reservoirs generally are less environmentally impacting than on-channel reservoirs there are still impacts associated with the off-channel reservoir.

Pages ES-4 and ES-5: Page ES-4 notes that in Scenario 1, the desired firm yield of 60,000 ac-ft/yr could be met even without an off-channel reservoir by using more senior GBRA water rights with occasional suspension of irrigation demands. Page ES-5 notes that the firm yield of this proposed project with CCEF conditions (Scenario 3) dramatically decreases the firm yield, even with a large off-channel reservoir. There are obvious trade-offs here that might yet result in a satisfactory outcome for all. In some river basins, agricultural irrigation occurs during wet years, but is curtailed during dry years (with compensation provided to affected farmers). This is sometimes referred to as a “dry year option” lease on water rights. It would be helpful to know the firm yield of Scenario 3 if senior water rights were used to firm up the junior water right. Also important would be the frequency and quantity of deferred irrigation diversions that would need to be compensated for. While the economic analysis in Section 6 does not quantify the economic benefits of instream flows and freshwater inflows, it is clear that such flows do have economic benefits and thus funds may possibly be available to protect such flows during dry years. Also, another reason why Scenario 3 generates a small firm yield is that the maximum diversion rate in wet years (75,000 ac-ft/yr) is not much larger than the desired firm yield (60,000 ac-ft/yr). Scenario 3 would be more viable if the maximum annual diversion were increased. Such a permit amendment may achieve broad support if linked to a commitment to refrain from pumping during drier periods, e.g., as per CCEF, Lyons, or other guidelines. Combined, these permit amendments and accommodations could result in a project that protects agricultural users, municipal user, and the environment.

TPWD staff would like to offer the following comments on “Study 2 Brackish Groundwater Supply Evaluation”

Pages ES-2 and ES-5: Page ES-2 cites a brine flow of 0.46 MGD. Pages ES-5 cites 3.46 MGD. Please doublecheck.

Pages ES-2, 3, and 10: There appears to be two flow splits, one of 70/30 and one of 88/12. Please add clarification to the text to explain the distinction between these splits. A rough schematic of water flows may be helpful.

Pages ES-2, 3 and 11: Page ES-2 states that the brine will have a TDS concentration of 8,000 mg/L. Pages ES-2 and 10 indicate that the TDS concentration of the source water may be as high as 4,000 mg/L. Based on a treatment efficiency of 75%, the TDS concentration in the brine may be as high as 16,000 mg/L. This is important because a discharge of 16,000 mg/L is of significantly greater concern to TPWD staff than a discharge of 8,000 mg/L. Please provide additional details in the text if possible.

The Executive Summary describes the brine as 0.46 MGD (0.7 cfs) at a concentration of 8,000 mg/L. However, the actual value may be 3.46 MGD (5.3 cfs) at 16,000 mg/L. These are importantly different to the fish and wildlife resources of San Antonio Bay. In addition, page 22 of the Study 1 report “Lower Guadalupe Water Supply Project for GBRA Needs” mentions that the LGWSP Scenario 2 is expected to produce 6.86 MGD of 8,000 mg/l TDS on peak days. Please discuss how these two projects combined are expected to affect estuarine water quality.

TPWD staff strongly encourages significant data collection before embarking on any project that assumes that the freshwater portion of the Edwards Aquifer is not hydraulically connected to the saline portion. Too much effort has been (and continues to be) invested in managing the freshwater portion of the Edwards Aquifer to allow the bottom to drop out from under the process.

Thank you for your consideration of these comments. Should you have any questions, please do not hesitate to contact me at cindy.loeffler@tpwd.state.tx.us or 512-389-8715.