

## Section 6

### Texas Water Development Board Comments and LERWPG Responses -- Contract No. 0704830700

#### Region O, Region-Specific Contract Studies 1-3

- 1) Population and Water Demand
- 2) Evaluation of Water Supplies from the Dockum Aquifer
- 3) Coordination of Regions A and O

#### TWDB Comments on Draft Final Region-Specific Study Reports

##### General Comments

These comments pertain to the entire report since the three region-specific studies are bound in one report and the chapter numbers do not correspond with the task numbers (studies 1-3).

1. Please consider revising the title of the report to indicate that it includes three region-specific studies and what each study focused on.  
*Response: The title has been expanded to include the following wording "Estimates of Population and Water Demands for New Ethanol Industries and Expanding Dairies; Evaluation of Water Supplies and Desalination Costs of Dockum Aquifer Water, and Video Conferencing Facilities Available for Coordination Between Regions A and O."*
2. Please submit all data, maps, and functioning analytic models in an electronic format along with the final report as required by the contract between TWDB and Region O.  
*Response: Data, Maps, and Analytic Models developed during the study will be submitted to TWDB, as required in the contract.*
3. In the Executive Summary and Section 5, please consider indicating the conclusions associated with each of the region-specific studies. As written, it is difficult to identify specific conclusions associated with each study.  
*Response: The conclusions of each Section are presented in Section 5 and the Executive Summary.*

#### Region-Specific Study 1, Population and Water Demand

1. Due to the increased dairy and ethanol production, the report also recommends increasing population and water demand projections to support additional labor needed to operate new facilities and supporting businesses in certain counties. Recommended revisions to county projections range from 2,405 persons in 2010 to 4,255 in 2060. While the reasoning behind these recommended increases is valid and well presented, a comparison of TWDB projections in the 2006 regional plan (based on 2000 Census data) and historical county population estimates from the Texas State Data Center (TSDC) show that recent and current estimates are less than the original TWDB projections. For example, for 2010 the report recommends an increase of 336 people in Bailey County, and the TWDB projection is higher than the 2007 TSDC estimate by 414 individuals for that county. In total, for all counties with revised projections, TWDB projections exceed TSDC estimates by 11,140 in 2007 and requested increases to population forecasts recommended in the report total only 2,405. Thus, the TWDB staff does not recommend

that Region O request revisions to the TWDB's 2006 population and municipal water demand projections.

*Response: As stated, TSDC data show population declines for the Region O Counties since year 2000. In addition, enrollment in nearly all of the Independent School Districts of Region O, as reported by Education Intelligence Agency, has declined during the period 2005 through 2006. Thus, it appears that expanding employment in the Dairy and Ethanol Industries of the region are somewhat offsetting population declines, as reported by the TSDC, and do not indicate that the LERWPG should revise the population and water demand projections for use in regional water planning.*

2. The contract scope of work and the objectives included in Section 1 of the report state that additional population and quantities of municipal water will be estimated for the listed counties, including cities in each county. Since the report only provides estimates for counties, please include the estimates for cities in each county.

*Response: The populations involved are a part of the agricultural labor force for which data are not available with which to indicated city of "residence."*

3. TWDB's acceptance of the final report does not constitute approval of any revised population or water demand projections contained therein. The formal procedure for requesting revised projections is stated in TAC 357.5 (d) (2): "Before requesting a revision to the population and water demand projections, the regional water planning group shall discuss the issue at a public meeting for which notice has been posted pursuant to the Open Meetings Act in addition to being published on the internet and mailed at least 14 days before the meeting to every person or entity that has requested notice of regional water planning group activities. The public will be able to submit oral or written comment at the meeting and written comments for 14 days following the meeting. The regional water planning group will summarize the public comments received in its request for projection revisions. Within 45 days of receipt of a request from a regional water planning group for revision of population or water demand projections, the executive administrator shall consult with the requesting regional water planning group and respond to their request."

All requested revisions which are approved following consultation with the Texas Department of Agriculture, Texas Commission on Environmental Quality, and Texas Parks and Wildlife Department, will then be presented for consideration of Board approval at the next scheduled meeting.

*Response: The LERWPG notes this comment, and will proceed accordingly (Please see response to Number 1 above).*

## **Region-Specific Study 2, Groundwater Availability from the Dockum Aquifer**

1. In section 3.1 (Groundwater Availability from the Dockum Aquifer, page 3-2, paragraph 1, line 1), please add Lamb County to the list of counties.

*Response: Lamb County has been added, as requested.*

2. In section 3.1.1 (Hydrogeologic Framework of Dockum), page 3-6, please provide the reference for McGowen and others (1977).

*Response: A footnote has been added to provide the reference.*

3. Please correct the spelling of *Herford* to the correct spelling (*Hereford*) throughout the report.  
*Response: The spelling of Hereford has been corrected.*
4. In section 3.1.6.4 (Estimated Quantity of Production and Drawdown), page 3-26, paragraph 2, lines 4-5, please explain why the salinity of produced water in the Deaf Smith County well field is expected to be in the 5,000 to 8,000 mg/l TDS range. Data, albeit limited, shows the TDS in Deaf Smith County is less than 5,000 mg/l (see pages 3-19 and 3-21).  
*Response: In the vicinity of the Deaf Smith potential well field, the data (Figures 3.1-13 and 3.1-15 of the report indicate a rapid transition from saline to very saline waters. Therefore, it was decided to be on the "conservative side" and base the analyses upon salinities in the 5,000 mg/L to 8,000 mg/L instead of 3,000 mg/L to 5,000 mg/L.*
5. In section 3.3.2.2 (Deep Well Injection – Methods and Costs), page 3-50, reference in footnote, please correct the reference to *Mace and others, 2006, Please pass the salt: using oil fields for the disposal of concentrate from desalination plants, TWDB Report 366, 198 p.*  
*Response: The reference has been added.*
6. The contract scope of work indicates that cost estimates would be developed for desalination plants ranging capacity from 0.2 to 2 MGD, while the report presents cost estimates for 1, 3, and 10 MGD plants. Please provide the rationale for the selected plant capacities and variance from the contract scope of work.  
*Response: An analysis was added for a desalt plant capacity of 0.2 MGD. Plant sizes were selected to provide information for applicable ranges of needs of industrial and municipal water users, and to test and illustrate the potentials for economies of sizes of facilities to lower unit cost of desalted water.*

### **Region-Specific Study 3, Coordination of Regions A and O**

1. The contract scope of work item 3 B states that Region O will identify and survey interactive video conferencing facilities, including Region A Planning Group entities and Texas Tech. Please list or otherwise include the results of the survey in the final report. In addition, item 3 B further states "the nature of this work will be descriptive in terms of facility locations, capabilities, costs, and other information found to be pertinent". Please consider including a table summarizing the details of the facilities found so that Regions A and O can better compare the facilities, including the services and costs of each.  
*Response: Additional information and explanations have been added, as suggested.*