

**Monthly Letter Progress Report #5 -  
July & August 2016  
Study of Brackish Aquifers in Texas – Project No. 3 –  
Rustler Aquifer  
TWDB Contract No. 1600011949**

*Submitted to*

**Texas Water Development Board  
P.O. Box 13231  
Austin, Texas 78711**

*Prepared by:*



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Austin, Texas 78754  
512/425-2000**

**October 12, 2016**

**Monthly Letter Progress Report # 5 – July and August 2016**  
**Study of Brackish Aquifers in Texas – Project No. 3 –**  
**Rustler Aquifer**  
**TWDB Contract No. 1600011949**

**1.0 Budget and Expenses**

This report summarizes the project costs for the billing period of July and August 2016. The total billed expenses through August 2016 are \$200,000. A budget breakdown by tasks is provided in Table 1. A copy of the progress report has been sent to TWDB contracts department along with the monthly invoice. At this date the contract is complete with all deliverables delivered on time and there is no budget remaining.

TASK	DESCRIPTION	Budget	Invoices			Remaining Budget
			Current	Previous	Total	
1	Project Management	\$ 5,234.75	\$ 231	\$ 3,418	\$ 3,649	\$ 1,586
2	Delineate Vertical & Horizontal Extent of Fresh, Brackish & Saline Groundwater	\$ 80,687.86	\$ 25,928	\$ 48,787	\$ 74,715	\$ 5,973
3	Quantify Volume of Fresh, Brackish & Saline Groundwater	\$ 24,678.93	\$ 11,367	\$ 13,360	\$ 24,727	(\$ 48)
4	Delineate Potential Production Areas	\$ 22,531.76	\$ 9,621	\$ 13,716	\$ 23,336	(\$ 804)
5	Determine Availability	\$ 26,086.34	\$ 13,355	\$ 14,187	\$ 27,542	(\$ 1,456)
6	Final Report, Documentation & Technology Transfer	\$ 40,780.36	\$ 24,514	\$ 21,517	\$ 46,031	(\$ 5,251)
Total		\$ 200,000	\$ 85,015	\$ 114,985	200,000	\$ 0.00

**Table 1. Project Budget Versus Expenses**

**2.0 Progress on Tasks**

This report summarizes activities on project tasks for July and August of 2016 and is the fifth and final contract progress report.

Task 1 Project Management

INTERA Project Management in the months of July and August activities were focused on delivery of the Draft and Final reports for the Study of Brackish Aquifers in Texas, Project No. 3: Rustler Aquifer, TWDB Contract 1600011949.

On August 9<sup>th</sup> INTERA participated in and presented at a Stakeholder Meeting held for the HB-30 Projects at the TWDB.

Task 2 Delineate Vertical and Horizontal Extent of Brackish and Saline Groundwater

Work on Task 2 was essentially complete prior to July. However, Dr. Carlos Torres-Verdin and his group at the University of Texas submitted their invoice in August. Their work covered by the invoice was related to development of the Draft Techniques Report (Subtask 2.2) and the detailed analysis of geophysical logs at key wells and the development of porosity estimates for all key wells with porosity logs (Subtask 2.6).

Task 3 Quantify Volume of Fresh, Brackish and Saline Groundwater

In July INTERA completed the development of the tool to calculate volume of saline and fresh groundwater within the Magenta dolomite, the Culebra dolomite, and the Los Medanos limestone. INTERA worked with the TWDB to make sure that the code computed the desired output in a format desired by the TWDB. Volume tables were all calculated and checked for reporting.

Task 4 Delineate Potential Production Areas

Task 4.1 - Refine Hydrostructural Model and Transmissivity Estimates

Through the process of development of fresh and saline groundwater volumes, significant effort was expended to get the aquifer structure (thickness) in a self-consistent format. This required many iterations because of the complexity of structure within the aquifer. This work was completed in July.

Task 4.2 – Map Hydrogeologic Barriers

No additional progress was made on this task.

Task 4.3 – Identify Protected Areas

No additional work was performed under this task in July or August.

Task 4.4 – Identify Potential Production Areas

No additional work was performed in defining Potential Production Areas (PPAs) in July or August. These were defined by the stakeholder meeting held in Fort Stockton on June 16<sup>th</sup>.

Task 4.5 – Potential Production Area Meeting with TWDB

No additional work was performed under this task in July or August.

Task 5 Determine Availability of Brackish Groundwater in Potential Production Areas

Preliminary ideas regarding well fields and the method for modeling well fields were developed in June. On June 22<sup>nd</sup> INTERA had the first of meetings with TWDB BRACS staff to review our ideas regarding well fields and to present a preliminary modeling approach as well as preliminary results. INTERA received feedback on our approach and a follow-up meeting was planned and held on July 13<sup>th</sup> 2016. All availability modeling of the five Potential Production Areas was completed in July.

Task 6 Final Report, Documentation and Technology Transfer

INTERA Project Management in the months of July and August activities were focused on delivery of the Draft and Final reports for the Study of Brackish Aquifers in Texas, Project No. 3: Rustler Aquifer, TWDB Contract 1600011949. The Draft Report was delivered on time 8 AM of the first business morning after July 31<sup>st</sup>. INTERA responded to comments in August and the Final Report was delivered on time September 1<sup>st</sup>.

**3.0 Planned Activities for the Next Month**

The contract is complete.



# HUB Subcontracting Plan (HSP)

## Prime Contractor Progress Assessment Report

*This form must be completed and submitted to the contracting agency each month to document compliance with your HSP.*

Contract/Requisition Number: 1600011949 Date of Award: 1/6/2016 Object Code: \_\_\_\_\_  
(mm/dd/yyyy) (Agency Use Only)

Contracting Agency/University Name: Texas Water Development Board

Contractor (Company) Name: INTERA Incorporated State of Texas VID #: 1743010638-9000

Point of Contact: Kris Spencer Phone #: 512-425-2044

Reporting (Month) Period: July -August 2016 Total Amount Paid this Reporting Period to \$ 85,015.41

### Report HUB and Non-HUB subcontractor information

Subcontractor's Name	Subcontractor's VID or HUB Certificate Number	*Texas Certified HUB? (Yes or No)	Total Contract \$ Amount from HSP with Subcontractor	Total \$ Amount Paid This Reporting Period to Subcontractor	Total Contract \$ Amount Paid to Date to Subcontractor	Object Code (Agency Use Only)
Jack Sharp			\$ 6,000.00	\$ 100.00	\$ 1,700.00	
Dennis Powers			\$ 20,000.00	-	\$ 19,136.05	
Torres-Verdin/UT			\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	
Carollo			\$ 2,000.00	\$ 1,694.58	\$ 1,694.58	
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<b>TOTALS:</b>			\$ 58,000.00	\$ 31,794.58	\$ 52,530.63	

Signature: Kris Spencer Title: AR/AP Spems Date: \_\_\_\_\_