

Texas AgriLife Research
Texas Water Resources Institute
Colorado River Alluvium Segment 1428 Case Study
FY 11 CWA 319(h)
TCEQ Project No. 582-11-13000

Quarter no. 3 From 3/1/2012 Through 5/31/2012 .

I. Abstract

This quarter, project partners participated in a QAPP planning meeting as well as made several revisions to the existing draft QAPP. Project partners have also contacted LCRA about finalizing sampling locations for the project. Next quarter will consist of finalizing the QAPP, installing sampling wells and potentially beginning routine sampling.

II. Overall Progress and Results by Task

TASK 1: Project Administration

Subtask 1.1: Project Oversight – The Project will be administrated by the Texas AgriLife Research, Texas Water Resources Institute (TWRI); the Texas AgriLife Research, Soil and Crop Sciences Department (SCSC); and the University of Texas at Austin Bureau of Economic Geology (UT-BEG) in conjunction with the companion Phase I 604(b) project. TWRI will provide technical and fiscal oversight of the project staff and subcontractors to ensure Tasks and Deliverables are acceptable, and are completed as scheduled and within budget. With the TCEQ Project Manager's authorization, project oversight status will be provided to the TCEQ with the Quarterly Progress Reports (QPRs).

The following actions have been completed during this reporting period:

- A. TWRI has provide guidance and assistance to the project team as well as maintained contact to ensure project deliverables are on time and of acceptable quality.

37% Complete

Subtask 1.2: QPRs – TWRI, with assistance from the Project Team, will submit QPRs to the TCEQ by the 15th of the month following each state fiscal quarter for incorporation into the Grant Reporting and Tracking System (GRTS). Progress reports will contain a level of detail sufficient to document the activities that occurred under each task during the quarter, and will contain a comprehensive tracking of deliverable status under each task. Progress reports will be delivered to TCEQ project manager.

The following actions have been completed during this reporting period:

- B. TWRI submitted the 3rd QPR for this project on June 14, 2012.

37% Complete

Subtask 1.3: *Reimbursement Forms* – Reimbursement forms will be submitted to the TCEQ by the last day of the month following each state fiscal quarter. For the last reporting quarter of the project, Reimbursement Forms are required on a monthly basis.

The following actions have been completed during this reporting period:

- a. As of February 29, 2012, a total of \$2,563 or about 2% of total project funds have been expended.

2% Complete

Subtask 1.4: *Contract Communication* – TWRI will participate in a post-award orientation meeting with TCEQ within 30 days of contract execution. TWRI (and the Project Team as needed) will maintain regular telephone and/or email communication with the TCEQ Project Manager regarding the status and progress of the project in regard to any matters that require attention between QPRs. This will include a call or meeting each January, April, July, and October. Minutes recording the important items discussed and decisions made during each call will be attached to each QPR. Matters that must be communicated to the TCEQ Project Manager in the interim between QPRs may include:

- Requests for prior approval of activities or expenditures for which the contract requires advance approval or that are not specifically included in the scope of work
- Notification in advance when the Project Team has scheduled public meetings or events, or other major task activities under this contract
- Information regarding events or circumstances that may require changes to the budget, scope of work, or schedule of deliverables. Such information must be reported within 48 hours of discovering these events or circumstances

The following actions have been completed during this reporting period:

- a. TWRI, SCSC, & UT-BEG and TCEQ met on March 12 at TCEQ to discuss the status of the project as well as needed language in the QAPP

20% Complete

Subtask 1.5: *Annual Report Article* – TWRI, with assistance from the Project Team, will provide an article for the Nonpoint Source Annual Report upon request by the TCEQ. This report is produced annually in accordance with Section 319(h) of the CWA, and is used to report Texas' progress toward meeting the CWA § 319 goals and objectives, and toward implementing its strategies as defined in the Texas Nonpoint Source Management Program. The article will include a brief summary of the project and describe the activities of the past fiscal year.

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

TASK 2: Public Outreach

Subtask 2.1: *Implement Communication Plan – TWRI with assistance from the project team will implement the communication plan developed through the companion CWA 604(b) project to inform and educate the public and government officials about the project goals, results, conclusions, and implications for other stream and river segments.*

The following actions have been completed during this reporting period:

- a. Project partners have been in contact with LCRA regarding installation locations of piezometers.

37% Complete

Subtask 2.2: *Public Outreach Materials – The results of this study will be used by TWRI and the project team to develop educational materials for private well owners to allow them to assess vulnerability to contamination from pathogens and what practices might be used to mitigate such problems. These educational materials will include project fact sheets. At project completion, a one to two page project fact sheet summary will be developed that will illustrate the study process and results related to developing best management practices for the protection of ground water quality and the protection and improvement of surface water quality related to NPS pollution. Educational materials will be provided for inclusion on the TCEQ web site and the Project Teams' websites.*

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

Subtask 2.3: *Program Coordination – TWRI with assistance from the Project Team will coordinate with state and local officials and ongoing outreach programs to inform and educate the stakeholders about project goals, solicit their input on the studies and outreach materials, and to present the project results.*

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

Subtask 2.4: *Landowner Coordination – After data analysis has been conducted, participating landowners will be informed by TWRI and the project team of water quality results of samples collected on their property.*

The following actions have been completed during this reporting period:

- b. No activity to report this quarter.

0% Complete

Subtask 2.5: *Public Meetings – In addition, should the TCEQ wish to present the results of the studies in a public meeting format, the Principal Investigator(s) will be available for up to two meetings to present the results of the investigation, provide recommendations for mitigation of*

water quality pollution and to answer questions related to the study.

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

Subtask 2.6: Web Site Updates – The TWRI web page will be updated to include project information and outreach materials.

The following actions have been completed during this reporting period:

- a. The project website is located at : <http://waterinteractions.tamu.edu/>
- b. This quarter, the website was viewed by: 34 total unique visitors
 - 9 unique visitors in March 2012
 - 14 unique visitors in April 2012
 - 11 unique visitors in May 2012

37% Complete

TASK 3: Quality Assurance Project Plan

Subtask 3.1: QAPP for Monitoring – TWRI with assistance from project personnel will develop a QAPP for submittal to the TCEQ with project specific data quality objectives consistent with the US Environmental Protection Agency (EPA) Requirements for Quality Assurance Project Plans (QA/R5) format and the TCEQ NPS QAPP Shell 120 days prior to the initiation of any data collection. All of the monitoring procedures and methods prescribed in the QAPP will be consistent with the guidelines detailed in the TCEQ Surface Water Quality Monitoring Procedures, Volume 1 and 2. The QAPP will be developed by a subcontractor with technical assistance from the Project Team, TCEQ Project Manager, Quality Assurance staff, technical staff, management, and contractors. The QAPP will be submitted for approval by the TCEQ and must be approved by TCEQ before any data collection begins. Additional details regarding the proposed monitoring are given in Subtask 4.3.

The following actions have been completed during this reporting period:

- a. A QAPP meeting was held on March 12, 2012 at TCEQ headquarters where specific sections of a draft QAPP were discussed
- b. A draft QAPP was sent to TCEQ for review

37% Complete

Subtask 3.2: QAPP Update – Annually throughout the project period, TWRI with assistance from the Project Team will provide input to TCEQ 60 days prior to the end of the effective period of the QAPP, and develop annual QAPP revisions, if needed, no less than 45 days prior to the end of the effective period of the QAPP.

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

Subtask 3.3: *QAPP Amendments* – If required by changes in the sampling procedures, DQOs or Project Plan, amendments to the QAPP and the reasons for the changes will be documented, and revised pages will be forwarded to all persons on the QAPP distribution list by the Quality Assurance Officer (QAO). Amendments shall be reviewed, approved, and incorporated into a revised QAPP during the annual revision process or within 120 days of the initial approval in cases of significant changes.

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

TASK 4: Pathogen Risk to Human Health in Potable Water Related to NPS Contamination: Colorado River Alluvium Case Study and Report

Subtask 4.1: *Landowner Agreement* – TWRI with the assistance of project personnel will receive final permission agreements from landowners to sample local surface or groundwater and if necessary install groundwater wells.

The following actions have been completed during this reporting period:

- a. Well sites have been identified at the Austin Water Utility's Hornsby Bend Park and at LCRA McKinney Roughs. Drilling and installation plans are being determined.
- b. UTBEG has made contact with LCRA McKinney Roughs regarding drilling sites

37% Complete

Subtask 4.2: *Water Well Drilling* – Upon landowner agreement, Texas Agrilife Research or a subcontractor will strategically install up to four groundwater monitoring wells as necessary. Upon completion of the project, wells will either be transferred with landowner agreement or capped at the cost of this project.

The following actions have been completed during this reporting period:

- c. No activity to report this quarter.

0% Complete

Subtask 4.3: *Groundwater Sampling Analysis* – Texas AgriLife Research with the assistance of project personnel will ensure samples are analyzed for major chemistry ions, fecal indicator microorganisms, and pathogens. The duration of data collection for this project is estimated to be approximately 12 months. One to two transects of wells will be established by either identifying existing wells or drilling new wells (up to four) as necessary. Groundwater sampling locations will attempt to be located along reaches of the river segment where long-term surface water quality databases exist. Each transect will begin at the edge of the river, extend perpendicular to the channel, and consist of two to three wells at varying distances from the

river. Attempts will be made to collect samples under dam-influenced flow, base-flow, and storm-flow conditions. For each round of groundwater sampling, paired surface water samples will be collected as grab samples at the nearest accessible point on the river. A minimum of three rounds of samples will be collected over a 12-month period. A minimum of 16 samples will be assayed for levels of fecal indicator bacteria (total coliforms, fecal coliforms, and E. coli). If groundwater samples test positively for the presence of fecal indicator bacteria, a minimum of four groundwater samples (and adjacent surface water) will be assayed for the presence of protozoan and viral pathogens (Cryptosporidium and enteroviruses).

The following actions have been completed during this reporting period:

- d. No activity to report this quarter.

0% Complete

Subtask 4.4: Data Collection – Upon approval of the QAPP, the Project Team will conduct the monitoring, as outlined in the QAPP, to achieve DQOs.

The following actions have been completed during this reporting period:

- e. No activity to report this quarter.

0% Complete

Subtask 4.5: Data Submittals – Texas AgriLife Research with assistance from the Project Team, will review, verify, and validate water quality monitoring data before it is submitted to the TCEQ. Data will be submitted to TCEQ biannually and at least 1 month prior to use, or prior to presenting to stakeholders.

The following actions have been completed during this reporting period:

- f. No activity to report this quarter.

0% Complete

Subtask 4.6: Data Analysis and Pathogen Risk to Human Health in Potable Water Case Study Report Preparation – Objective 4 will have produced the basic data necessary to assess ground water quality and its potential impact by pathogens from river water or other surface sources. This task will review and analyze these data, form conclusions based on hydrologic and biologic principals, and prepare a report that presents the raw data, methods of analyses and conclusions formed. Texas AgriLife Research, with the assistance from project personnel, will produce a draft report for review and incorporate comments to produce a final report.

The following actions have been completed during this reporting period:

- g. No activity to report this quarter.

0% Complete

TASK 5: Final Report - Colorado River Segment 1428 Impacts to Groundwater and Potential Hazards to Human Health: Recommendations for Watershed Management

Subtask 5.1: *Draft Report - TWRI, with assistance from the Project Team, will provide a draft report summarizing all project activities, findings, and the contents of all previous deliverables, referencing and/or attaching them as web links or appendices. This comprehensive, technical report will provide analysis of all activities and deliverables under this scope of work as well as work from a companion 604(b) grant project titled "Pathogen Risk to Human Health in Potable Water Related to Nonpoint Sources of Contamination: Colorado River Alluvium Case Study, River Segment 1428." Based on the results of these two projects, this report will include recommendations regarding the status of the Category 5c listing, what action needs to be taken to reduce human health impacts, and recommendations for moving forward with watershed management for this segment and similar watersheds. The report will include the following information:*

*Title
Table of Contents
Executive Summary
Introduction
Project Significance and Background
Project Studies and Coordination Activities (Objectives 2 and 4)
Methods
Results and Observations
Discussion
Summary
References
Appendices*

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

Subtask 5.2: *Final Report – To revise the Draft Report to address comments provided by the TCEQ Project Manager. The final report will be submitted to the TCEQ Project Manager and subsequently to EPA.*

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

III. Related Issues/Current Problems and Favorable or Unusual Developments

IV. Projected Work for Next Quarter

- Finalize the QAPP
- Drill necessary wells
- Begin collecting samples