

**Texas AgriLife Research  
Texas Water Resources Institute**

**Water Quality Monitoring in the Buck Creek Watershed and Facilitation of Buck Creek  
Watershed Partnership**

**FY 10 CWA 319(h)  
TSSWCB Project No. 10-06**

Quarter no. 3 From 7.1.2011 Through 9.30.2011

**I. Abstract**

Work conducted this quarter has focused on stakeholder engagement. The first sampling event was scheduled and completed May; since then the creek has been dry due to exceptional drought conditions and has thus precluded any water quality monitoring. A meeting of the Buck Creek Watershed Partnership was held August 25<sup>th</sup> in Wellington and focused on providing an overview of this project as well as an update on the WPP development process.

**II. Overall Progress and Results by Task**

**TASK 1: Project Coordination and Administration**

Subtask 1.1: *TWRI will prepare electronic quarterly progress reports (QPRs) for submission to the TSSWCB. QPRs shall document all activities performed within a quarter and shall be submitted by the 15<sup>th</sup> of January, April, July and October. QPRs shall be posted on the project website and distributed to all project partners.*

The following actions have been completed during this reporting period:

- a. Submitted Year 1, Quarter 3 report to TSSWCB on October 13, 2011.

**37% Complete**

Subtask 1.2: *TWRI will perform accounting functions for project funds and will submit appropriate Reimbursement Forms to TSSWCB at least quarterly.*

The following actions have been completed during this reporting period:

- a. As of May 31, 2011, a total of \$16,902 or approximately 15% of project funding has been expended.

**20% Complete**

Subtask 1.3: *TWRI will host coordination meetings, conference calls, or TTVN meetings, as appropriate, with project partners in order to efficiently and effectively achieve project goals, coordinate efforts and summarize activities and achievements made throughout the course of this project. TWRI will develop lists of action items needed following each project coordination meeting and distribute to project*

*personnel.*

The following actions have been completed during this reporting period:

- a. Individual phone calls replaced the organized meeting preparing for the stakeholder meeting.
- b. A conference call was held September 7<sup>th</sup> to discuss several comments received on the Buck Creek WPP.

**37% Complete**

## **TASK 2: Quality Assurance Project Plan Development**

*Subtask 2.1: TWRI will develop a QAPP for activities in Task 3 consistent with EPA Requirements for Quality Assurance Project Plans (QA/R-5) and the TSSWCB Environmental Data Quality Management Plan.*

The following actions have been completed during this reporting period:

- a. The QAPP was approved on April 12, 2011.

**100% Complete**

*Subtask 2.2: TWRI will submit revisions and necessary amendments to the QAPP as needed.*

The following actions have been completed during this reporting period:

- a. No activity to report at this time.

**0% Complete**

## **TASK 3: Water Quality Data Collection and Analysis**

*Subtask 3.1: AgriLife Vernon will conduct routine water quality monitoring collecting water samples, field parameters (DO, pH, temperature, specific conductance) and streamflow. Samples will be collected once monthly from 7 sampling sites in the Buck Creek watershed (Sites 3, 5, 6, 10A, 10C, 11, and 13). Total number of samples budgeted for collection through this subtask is 126; however, the number actually collected will likely be lower due to the ephemeral nature of the creek.*

The following actions have been completed during this reporting period:

- a. No activity to report at this time; the creek remains dry.

**10% Complete**

*Subtask 3.2: AgriLife Vernon will conduct biased flow water quality monitoring collecting water samples, field parameters (DO, pH, temperature, specific conductance) and streamflow during 6 storm events. Samples will be collected from 7 sampling sites in the Buck Creek watershed (Sites 3, 5, 6, 10A, 10C, 11, and 13). Total number of samples budgeted for collection through this subtask is 42.*

The following actions have been completed during this reporting period:

- a. No activity to report at this time; the creek remains dry.

**10% Complete**

*Subtask 3.3: AgriLife Vernon will enumerate E. coli colonies in water samples collected in subtasks 3.1 and 3.2 using EPA Method 1603. E. coli counts will be recorded electronically and in hard copy format.*

The following actions have been completed during this reporting period:

- a. No activity to report at this time; the creek remains dry.

**10% Complete**

*Subtask 3.4: AgriLife Vernon will assess nitrate levels in water samples collected in subtasks 3.1 and 3.2 using EPA Method 353.2. Nitrate concentrations will be recorded electronically and in hard copy format.*

The following actions have been completed during this reporting period:

- a. No activity to report at this time; the creek remains dry.

**10% Complete**

*Subtask 3.5: AgriLife Vernon will record and store all water quality data in electronic and hard copy formats. TWRI will transfer quarterly monitoring data from activities in Task 3 to TSSWCB for inclusion in TCEQ SWQMIS. Data will be transferred in the correct format using the TCEQ file structure, along with a completed Data Summary, as described in the most recent version of TCEQ Surface Water Quality Monitoring Data Management Reference Guide. Data Correction Request Forms will be submitted to TSSWCB whenever errors are discovered in data already reported. TWRI will also provide necessary information on this monitoring regime to RRA for inclusion in the Coordinated Monitoring Schedule.*

The following actions have been completed during this reporting period:

- a. A Microsoft Access database has been built to store all data collected through this project and will be put into use in early July.
- b. Data collected in the previous quarter have been inputted into the Buck Creek Water Quality Database.

**50% Complete**

*Subtask 3.6: AgriLife Vernon will develop a Technical Report that summarizes data collection and analysis results.*

The following actions have been completed during this reporting period:

- a. No activity to report at this time.

**0% Complete**

#### **TASK 4: Maintain Stakeholder Communication**

*Subtask 4.1: TWRI and AgriLife Vernon will collaborate to develop and publish 4 semi-annual newsletters that provide updates on water quality data collection efforts and progress toward implementing the WPP and other relevant information. The newsletter shall be distributed as most appropriate to individual landowners and entities in the watershed.*

The following actions have been completed during this reporting period:

- a. No activity to report at this time.

**25% Complete**

*Subtask 4.2: AgriLife Vernon or TWRI as appropriate will provide information to RRA for inclusion in the Clean Rivers Program Basin Summary Report and Basin Highlights Report. TWRI and/or AgriLife Vernon shall participate in RRA-sponsored meetings of the Clean Rivers Program Basin Steering Committee and Coordinated Monitoring meetings.*

The following actions have been completed during this reporting period:

- a. No new activity to report this quarter.

**20% Complete**

*Subtask 4.3: TWRI will ensure that the currently existing Buck Creek website (<http://buckcreek.tamu.edu/>) will be updated periodically to reflect accurate and current information regarding the project, WPP, implementation and other activities.*

The following actions have been completed during this reporting period:

- a. TWRI continues to maintain and update the project website.
- b. This quarter the website received 124 visits with 75% of those being new visits

**90% Complete**

*Subtask 4.4: TWRI and AgriLife Vernon will host and facilitate meetings of the Buck Creek stakeholders. Meetings will be held at a minimum of once annually for a total of 2 planned meetings. These meetings will be held to provide updates on the status of monitoring efforts, progress in identifying implementation funding, and movement towards water quality restoration.*

The following actions have been completed during this reporting period:

- a. A stakeholder meeting was held August 25<sup>th</sup> in Wellington to revisit the Buck Creek WPP and re-connect with watershed stakeholders.

**30% Complete**

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

- Exceptional drought and irrigation within the watershed have led to the creek largely drying up except for isolated areas. As such, sampling has not occurred this quarter and will remain limited next quarter.

### **IV. Projected Work for Next Quarter**

The following will be accomplished during the coming quarter:

- a. Continue sampling as planned.
- b. Develop 2<sup>nd</sup> Buck Creek Watershed Partnership Newsletter.
- c. Host partnership meeting as needed to discuss WPP development.