

**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. 5 From 1.1.2012 Through 3.31.2012

I. Abstract

Work conducted this quarter has focused on stakeholder engagement. The creek continues to be mostly dry due to exceptional drought conditions and extended crop irrigation. This has thus precluded any water quality monitoring. The Buck Creek Watershed Partnership met on January 10th in Wellington to discuss the final draft of the Buck Creek WPP. Comments were received and the WPP was submitted to TSSWCB on February 16, 2012.

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 15th 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 2, Quarter 1 report to TSSWCB on April 10, 2012.

63% 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 February 29, 2012, a total of \$69,578 or approximately 60% of project funding has been expended.

63% 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. The next coordination call is scheduled for early next quarter.

63% 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. The annual QAPP revision was submitted to TSSWCB on 1.23.2012 for review and approval.

25% 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. The effects of the drought are still being felt on Buck Creek. Despite recent rains, the creek still lacks sufficient water to collect samples.

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 largely 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; no samples collected this quarter due to lack of flow.

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; no samples collected this quarter due to lack of flow.

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. No activity to report at this time; no samples collected this quarter due to lack of flow.

b. 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. The December newsletter was developed and published this quarter (see attached).

50% 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. AgriLife Vernon personnel presented information at the Red River Basin advisory committee meetings in March.

50% 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 107 visits with 80% of those being new visits

94% 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 on January 10th to discuss the final draft of the Buck Creek WPP and to highlight the lack of water quality monitoring due to the drought.

75% 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 is likely to remain limited next quarter.

IV. Projected Work for Next Quarter

The following will be accomplished during the coming quarter:

- a. Continue sampling as planned.