

**Bacterial Monitoring for the Buck Creek Watershed
FY 03 CWA 319(h)
TSSWCB Project No. 03-7**

Quarter no. 12 From 7/01/06 Through 9/30/06.

I. Abstract

Sample collection concluded during this quarter and data are currently being analyzed for use in the final report. Continued drought conditions caused the majority of sampling sites to be dry during the quarter. One rainfall event did occur in August and enabled sample collection at sites 3, 4, 6, 10A, 10B, 10C, 11A, 11B, 12 and 13. A first draft of the final report is being developed by TAES Vernon and TWRI and will begin the revision and review process in the next quarter. Mark Belew and Cody Pope were hired at TAES Vernon to fill vacated positions and are contributing to the Buck Creek project.

II. Overall Progress and Results by Task

TASK 1: Program Coordination with Project Participants

Subtask 1.1: Conduct meetings as appropriate with project participants, landowners, and other interested parties to discuss water quality monitoring activities, project schedule, lines of responsibility, communication needs, and other requirements.

The following actions have been completed during this reporting period:

- a. No progress to report at this time.

90% Complete

Subtask 1.2: TAES will prepare electronic quarterly reports. All progress reports will also be provided to TCE project cooperators and participants, and Hall-Childress, Collingsworth, and Donley SWCD directors.

The following actions have been completed during this reporting period:

- a. Submitted Year 3, Quarter 4 report to TSSWCB on 10-13-06.

95% Complete

Subtask 1.3: TCE will provide leadership for educational programs about water pollution and project findings.

The following actions have been completed during this reporting period:

- a. TWRI maintains a project Web site which contains information about the project, the study area, photos, accomplishments, publications and educational outreach material, etc.

The web site is updated quarterly or as needed and can be viewed at <http://twri.tamu.edu/buckcreek>

86% Complete

Subtask 1.4: TAES and TCE will develop an electronic final report, which will include an executive summary of data collected during the project and educational program.

The following actions have been completed during this reporting period:

- a. Data compilation has been completed for final report purposes.
- b. Work on the first draft of the Buck Creek Final report began in August and is almost complete.

20% Complete

Subtask 1.5: TSSWCB, TWRI, RRA and local SWCDs will assist, when needed, with composition, editing, and publication of final report.

The following actions have been completed during this reporting period:

- a. TWRI has been working closely with TAES Vernon personnel to draft the first version of the final report.

15% Complete

TASK 2: Micro-Watershed Monitoring and Sampling

Subtask 2.1 Develop DQOs and a QAPP to be approved by USEPA.

The following actions have been completed during this reporting period:

- a. The annual update to the QAPP was approved on March 15, 2006.

100% Complete

Subtask 2.2: Select 12 or 13 sites to conduct water quality sampling. Maintain water quality monitoring equipment and collect water samples.

100% Complete

Subtask 2.3 TAES will obtain sampling locations and deploy in accordance with arrangements made.

100% Complete

Subtask 2.4 TAES will perform routine sampling, (grab sampling) at strategic locations within the Buck Creek watershed.

The following actions have been completed during this reporting period:

- a. Aside from one rainfall event during August, only sites 3, 10A, 10B and 10C had enough water present and flowing to be sampled during the quarter.
- b. Sampling for this project was completed with a final collection conducted on August 29.

100% Complete

Subtask 2.5 TAES will collect a minimum of 8 rain event/high flow grab samples from the sites over the course of the study.

The following actions have been completed during this reporting period:

- a. Sampling was conducted on August 23rd following a rainfall event. Samples were collected at sites 3, 4, 6, 10A, 10B, 10C, 11 above and below, 12 and 13.

100% Complete

Subtask 2.6 TAES will compile and analyze the sampling data. Data will be for informational and assessment purposes due to the limited data previously collected.

The following actions have been completed during this reporting period:

- a. All data have been collected for the project.
- b. Data are currently being analyzed and will be completed early in the next quarter.
- c. Daily, weekly, and monthly lab reports have been completed.
- d. Table 1 lists the *E. coli* counts for the quarter.

95% Complete

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

- Mark Belew was hired to replace Kurt Lemon as a research associate working for Dr. Sij at TAES Vernon. Cody Pope was also hired as a research technician and will take over duties performed by Perry White.
- Phyllis Dyer met the ranch foreman for the property above site 3 and gained permission to walk up the creek on that land.
- Phyllis talked with Keith Martin, a Farm Service Agent for Collingsworth County and obtained survey data and farm census data.
- Salt Fork, Hall-Childress, and Donley County Soil and Water Conservation Districts have agreed to allow Phyllis to attend meetings at least quarterly and update them on Buck Creek activities.
- The project rain gauge near site 10 disagrees with the gauge in Wellington which seems to have problem recording rain when no rain actually fell.

IV. Projected Work for Next Quarter

The following will be accomplished during the coming quarter:

- Dr. Sij will attend the Nonpoint Source Program Statewide meeting in Austin, October 12th.
- Phyllis Dyer will travel to El Paso on October 16-19 to study bacteria source tracking techniques and methodologies with George DiGiovanni for work beginning this fall.
- TSSWCB personnel plan to visit the project study area in November.

Appendix I:

E. coli data

Table 1: *E. coli* counts by sampling site and date collected

Site No:	11A	11B
12-Jul-06	NSC	NSC
1-Aug-06	NSC	NSC
8-Aug-06	NSC	NSC
15-Aug-06	NSC	NSC
23-Aug-06	214/278	234
29-Aug-06	NSC	NSC

Bold = rainfall event

Single samples exceeding the 394 colony maximum are shown in italics

NSC = No Sample Collected

Samples separated by a / are samples and duplicate samples taken in the same location