

**Texas AgriLife Research  
Texas Water Resources Institute**

**Modeling Support for Little Brazos River Tributaries Bacteria Assessment  
Texas State Soil and Water Conservation Board  
Total Maximum Daily Load Program  
TSSWCB Project #08-55**

Quarter no. 8 From 3/1/2010 Through 5/31/2010

**I. Abstract**

Work this quarter focused on incorporating new data such as septic and dog census data into the SELECT model. Modeling is now complete and results will be presented at the final stakeholder meeting. Work for the duration of the project will consist of finalizing the final report that will be submitted to the TSSWCB and conducting a last stakeholder meeting for the project.

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

**TASK 1: Project Coordination and Administration**

*Subtask 1.1: TWRI will prepare electronic quarterly reports for submission to the TSSWCB. All progress reports will be provided to all Project Participants. (Month 1 – 24)*

The following actions have been completed during this reporting period:

- a. The year 2, quarter 4 report was completed and sent to the TSSWCB on June 15, 2010

**100% Complete**

*Subtask 1.2: TWRI will submit appropriate Reimbursement Forms. (Month 1 – 24)*

The following actions have been completed during this reporting period:

- a. As of February 28, 2010, a total of \$25,179.50 or about 49% of total project funds have been expended.

**49% Complete**

*Subtask 1.3: TWRI and BAEN will participate in quarterly meetings (in person or TTVN) as appropriate with project participants to discuss project activities, project schedule, lines of responsibility, communication needs, and other requirements. (Month 1 – 24).*

The following actions have been completed during this reporting period:

- a. The project team has been actively visiting about project activities and timelines during the last quarter as work comes to a close.

**100% Complete**

*Subtask 1.4: TWRI and BAEN will attend and participate in public stakeholder meetings as needed. (Month 1 – 24)*

The following actions have been completed during this reporting period:

- a. BAEN and TWRI will participate in a Little Brazos River Tributaries Bacteria Assessment Project Public Meeting to be held during the month of July where LDC results will be presented.

**99% Complete****Task 2: Development of Quality Assurance Project Plan**

*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. (Month 1 – 2)*

The following actions have been completed during this reporting period:

- a. This task is complete.

**100% Complete**

*Subtask 2.2: Provide annual revisions to the QAPP and amendments, as necessary, to the TSSWCB and EPA. (Month 3 – 24)*

The following actions have been completed during this reporting period:

- a. This task is complete.

**100% Complete****Task 3: Conducting sanitary surveys to identify potential *E. coli* contributing sources in the impaired watershed**

*Subtask 3.1: BAEN will cooperate with BRA to develop a comprehensive GIS inventory for the study area through TSSWCB project 08-54. (Month 1 – 3)*

The following actions have been completed during this reporting period:

- a. No activity to report at this time.

**65% Complete**

*Subtask 3.2: TSSWCB, in coordination with SSL, will provide BAEN a current land use classification for the study area through TSSWCB project 08-52, Classification of Current Land Use/Land Cover for Certain Watersheds Where TMDLs or WPPs Are In Development. (Month 1 – 3)*

The following actions have been completed during this reporting period:

- a. This task is complete

### **100% Complete**

*Subtask 3.3: BAEN will assist BRA in designing a watershed source survey, to be conducted through TSSWCB project 08-54, that better characterizes the possible sources of bacteria loadings in the study area. (Month 1 – 4)*

The following actions have been completed during this reporting period:

- a. This task is complete.

### **100% Complete**

*Subtask 3.4: BAEN, with assistance from BRA through TSSWCB project 08-54, will conduct a LDC analysis of all historic and existing water quality monitoring data from the study area. LDCs will be developed for at least one critical index site per segment. LDCs shall be consistent with both EPA's An Approach for Using Load Duration Curves in the Development of TMDLs and EPA's Options for Expressing Daily Loads in TMDLs. (Month 3 – 6)*

The following actions have been completed during this reporting period:

- a. This task is complete.

### **100% Complete**

*Subtask 3.5: Using water quality monitoring data collected by BRA through TSSWCB project 08-54, BAEN, with assistance from BRA, will refine LDCs developed in subtask 3.4. LDCs will be used to determine bacteria load reductions needed to achieve water quality standards. (Month 7 – 21)*

The following actions have been completed during this reporting period:

- a. No activity to report at this time .

### **50% Complete**

*Subtask 3.6: BAEN, with assistance from BRA through TSSWCB project 08-54, will conduct watershed modeling for the study area. Utilizing information from the GIS inventory (Subtask 3.1), the source survey (Subtask 3.3), and water quality monitoring (TSSWCB project 08-54), and in combination with LDCs from Subtasks 3.4-3.5, BAEN will develop a spatially explicit or mass balance model, such as SELECT, for each of the five watersheds in the study area. Modeling will be used to estimate loadings from various sources and to identify critical loading areas within the watersheds. (Month 7 – 21)*

The following actions have been completed during this reporting period:

- a. SELECT runs have recently included septic and dog data to help in better estimating the bacteria loads. Results will be presented at the stakeholder meeting in July.

**100% Complete**

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

- a. Nothing to report.

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

- a. Work will also continue in the updating of the GIS for the watershed and will be incorporated into the modeling effort as it is acquired.
- b. Host final stakeholder meeting.
- c. Submit final report.