

**Best Management Practice- Benefit Verification Infrastructure Improvement Plan  
for the Bosque River Basin**

Texas Water Resources Institute  
FY06 Federally Appropriated Funds  
Project #06-64255

Quarter No. 4 From: 7/1/2007 Through: 9/30/2007

**I. Abstract:**

This project is an extension of a previous project that identified 22 feasible best management practices (BMPs) that can be implemented in the Bosque River watershed in an effort to reduce sediment and nutrient loads entering the waterway. This second phase of the project is using the Soil and Water Assessment Tool (SWAT) to evaluate various BMP implementation scenarios and their ability to effectively prevent nutrients and/or sediment from entering the waterway. Analysis is being done on a sub-watershed basis and only evaluates suites of BMPs instead of individuals.

In connection with the BMP evaluation, a document that describes each BMP in detail has been drafted. Essentially, a description is given for each BMP along with information about feasible locations, applicable operations, estimated capital costs, operation and maintenance requirements and costs, expected pollutant reductions and installation considerations. This document will be used by people interested in installing or implementing one or more of the suggested BMPs to gain information about the practice, costs and expected benefits.

Project work during the fourth quarter has focused on finalizing model calibration. The BMP description document first draft has been completed and has been sent out for review by project personnel during the next quarter. Some background work has started on the Environmental Infrastructure Improvement Plan. Once modeling activities are complete, work on this report will increase.

**II. Progress By Task:**

Task 1: SWAT Assessment of BMPs

Activity this quarter:

- a. Calibration of the model is in process and is planned for completion during the next quarter. SWAT is being calibrated for the time period 1970-2000.
- b. Validation of BMP effectiveness is yet to begin. Once the model has been fully calibrated, BMP evaluation will begin.

**60% Complete**

Task 2: Environmental infrastructure improvement plan for the North, Middle and South Bosque River

Activity this quarter:

- a. Work on this phase has continued, but is still in very preliminary stages. Once modeling activities have been completed more work will be focused on the drafting and completion of this plan.
- b. Current activities include compilation of background materials.

**15% Complete**

Task 3: BMP description document that discusses the effectiveness of each practice at reducing NPS pollution

Activity this quarter:

- a. The first draft of the document has been completed and has been sent out for review.
- b. Comments should be returned by November 2<sup>nd</sup>, at that time comment incorporation will begin.
- c. The final version of this document should be complete by the end of next quarter.

**95% Complete**

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

- A project meeting will be held during the next quarter to assess project progress and discuss modeling results.

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

- Model calibration and validation should be completed during the next quarter.
- Writing of the Environmental Infrastructure Improvement plan will continue during the upcoming quarter.
- Comments on the BMP description document will be received and addressed during the upcoming quarter.