

Transportation Pooled Fund Program

Project Title: HY-8 Culvert Analysis Program – Phase Three of Development Efforts		
Project Manager and Phone Number: Mr. Joe Krolak Principal Hydraulics Engineer FHWA Office of Bridge Technology, E75-322 1200 New Jersey Avenue, S.E. Washington DC 20590 202/366/4611 joe.krolak@dot.gov	Project No: TPF 5 (202)	Project is: <input type="checkbox"/> PLANNING <input checked="" type="checkbox"/> R&D
Reporting Period: FY 2011, second quarter (Jan - Mar)	Multi Year Project Yes	
Description of Work Performed/Progress in Second Quarter: Work continued on Task 2 – Enhance Source Code Efficiencies. The following subtasks are nearly completed: <ul style="list-style-type: none"> • Rewrite and test the new S1, S2, M1, and M2 backwater curve functions and rewrite the "Compute Outlet Control" function. • Merge the functions that compute critical depth into a single function that computes it directly and remove the old code that computes critical depth using interpolation tables. • Rewrite the "FinalBalance" function (to make it non-recursive). • Rewrite the CombineNextInc function (to make it non-recursive). In addition, Task 13 – Maintenance Activities continued: <ul style="list-style-type: none"> • Bug fixes were completed including the "Save/Save As" bug and the problem with SI units in the report. Effort anticipated in Third Quarter: <ul style="list-style-type: none"> • Complete Task 2 efforts. This includes: <ul style="list-style-type: none"> ○ Rewrite other recursive functions as needed (to make them non-recursive). ○ Refactor the "BALANCE" code to make it simpler and easier to understand. ○ Refactor water-surface profile computation codes to simplify the functions and make them easier to understand. ○ Rewrite several computation subroutines to enhance efficiency. • Begin the following tasks: <ul style="list-style-type: none"> ○ Task 4 – Implement Hydraulic Jump ○ Task 7 – Horizontal Culvert Barrels Funding Note: In addition to Tasks 4 and 7, funding is in place for the following: Task 5 Implement Broken Back Culvert, Task 6 Discharge Values Modification, and Task 13 Maintenance (3 additional months). Funding is being secured for Task 12 Generic Culvert Type/Material to add an aquatic organism passage module.		
STATUS AND COMPLETION DATE <p style="text-align: center;">Percentage of work completed to date for total project Project is: 15%</p> <p style="text-align: center;">_____ on schedule <input checked="" type="checkbox"/> behind schedule, explain:</p> <ul style="list-style-type: none"> • Acquisition process took much longer than expected. Awarded in September 2010. <p style="text-align: center;">Expected Completion Date: Summer 2012</p>		