TABLE B-4-2A
Calculation of Remaining Benefit Remaining Cost Ratio (RBRCR)
For non- beach nourishment projects

The RBRCR is the: Total Remaining Annual Benefits/ Remaining Annual Costs
(Remaining Annual Costs are: Remaining Base Costs at end of FY10 X (0.07245985) Capital Recovery Factor for 7 % discount rate for 50 years, or other applicable discount rate and period of analysis).

The instructions below and Table 1 are provided for you to calculate the RBRCR for non-beach nourishment projects. In Table 1 fictional project numbers have been provided to assist in the calculation. Only fill in the areas highlighted in yellow. Capital recovery and deflation factors will calculate based on the information you provide

Table 1 has three main sections, approved report, current price level and the RBRCR calculation. The first section requires data from the last approved report. Record the price level used in the approved report as well as total fully funded and base project cost. Record the calculated annual cost, and annual benefit from the approved report. The project discount rate and period of analysis used in the approved report will also be recorded. Project BCR will calculate based on the previously described input.

The second section requires the total and remaining fully funded project costs at the current price level to be recorded. The discount rate and period of analysis will also be recorded and used in the RBRCR calculation to follow. For this exercise the OMB discount rate of 7.00% will be used and the period of analysis should match that from the previous section.

The final section calculates the RBRCR.

COST:

Step 1. Add total remaining base costs at end of FY 11 at the current price level. (**Costs should match base costs from the from the budget submittal sheets for program year 2013. Base cost is the non escalated cost used to calculate BCRs and are usually reported on the PB-3 and PB-2A sheets.**)

Step 2. Add the present value of remaining interest during construction (IDC) associated with the remaining cost of construction.

Step 3. Will automatically sum remaining cost and remaining IDC

Step 4.   Will automatically convert remaining costs to the price level of approved report using deflator indices (use composite –weighted average CWCCIS indices found in :
http://www.usace.army.mil/inet/usace-docs/eng-manuals/em1110-2-1304/entire.pdf):

(Index for FY of the latest approved report / current FY index) = _____X Step 3

Step 5. Will automatically calculate Annualized Remaining Project Costs, Multiply Step 4 (Remaining Project Costs) by .07245985 (Capital Recovery Factor for 7 % interest for 50 years or other applicable period of analysis)

Step 6. Add total project annual O&M costs. **(at price level of last approved report)**.

Step 7. Estimate O&M costs that are associated with completed or functioning segments of the total project (sunk O&M costs). It is assumed that these O&M cost would be necessary to maintain the benefits of the completed or functioning project segments throughout the period of analysis.

Step 8. Add step 5 to Step 6 and subtract Step 7 (Spreadsheet will automatically calculate this) for total annual project costs.

BENEFIT:

Step 9. Report total annual benefits in the price level of the approved report and at the 7 percent discount rate. (Projects with a constant stream of benefits over the period of analysis will not be impacted by changes in discount rates. However, projects that have variable benefits over time will be affected by changes in the discount rate. The annual benefits should reflect these affects.

Step 10. Estimate the amount of annual benefits that would be expected to accrue over the period of analysis for completed or functioning components of the total project **(expected annual sunk benefits)** computed at the price level of report. The spreadsheet will automatically divide the remaining benefits by total benefits and enter into factor column to display a percentage of the expected annual sunk benefits. **Provide explanation as to how benefits associated with completed or functioning segments of the total project benefits were determined:**

Step 11. Remaining benefits are derived by subtracting Step 10 from Step 9. Table 1 will calculate these results automatically.

RBRCR Calculation:

Step 12 . Divide Step 11 (Expected Annual Remaining Project Benefits) by Step 8 (Annual Remaining Project costs). Table 1 will calculate these results automatically in the BCR column.

Step 13. Remaining Average Annual Net Benefits are automatically computed by subtracting Step 8 Total Annual Remaining cost from Step 11 Total Expected Annual Remaining Benefits.

Step 14. Explain how sunk O&M costs were derived. If sunk O&M cost are zero, explain why there are no sunk O&M

Step 15. Explain how sunk benefits were derived. If sunk benefits are zero, explain why there are no sunk benefits.