

ACKNOWLEDGMENTS

**ABSTRACT**

An Economic Analysis of Three  
Structural Methods of Streambank Protection.

Shahzaad Mohammed

An evaluation and analysis of the costs of three structural methods of streambank protection was undertaken. The three methods investigated were the rubble masonry wall, the gabion basket wall and a geogrid reinforced embankment system.

The evaluation for each method was done by estimating the direct base resources of labour, equipment and materials required to complete 25m of the protective works. A time-phased plan was then generated for each method from which resource histograms were developed. The results were then compared in the form of cost-time integrated or 'S' curves

The rubble wall was found to be the most expensive and took the longest duration to complete. Both the gabion and the geogrid walls, while being less expensive, were completed within 60% of the time required for the rubble wall construction.

Given these results, State agencies responsible for streambank protection can readily identify cost effective structural solutions. These solutions will facilitate the implementation of more efficient and appropriate means of construction, thereby contributing to national productivity.