

**Comment Response Document
Regarding the Total Maximum Daily Load of Sediment in the Evitts Creek
Watershed, Allegany County, Maryland**

The Maryland Department of the Environment (MDE) has conducted a public review of the proposed Total Maximum Daily Load (TMDL) of Sediment in the Evitts Creek Watershed, Allegany County, Maryland. The public comment period for the TMDL document and its accompanying addendum was open from August 9, 2006 through September 7, 2006. MDE received 1 set of written comments.

Below is a list of commentors, their affiliation, the date comments were submitted, and the numbered references to the comments submitted. In the pages that follow, comments are summarized and listed with MDE's response.

Author	Affiliation	Date	Comment Number
Jennifer Schaafsma	Maryland Department of Agriculture	August 28, 2006	1

Comments and Responses:

1. The commentor does not agree with assessment that the watershed is impaired. All of the data is clustered within the range of the reference watersheds. Furthermore, the sites with the highest embeddedness scores are in more urban areas, which would be expected. Also, bed and bank erosion is mentioned in the text, but not in the calculations. Finally, channelization in the urban areas of the watershed is increasing scouring in the streambed.

Response: The parameter used to determine a sediment impairment for the Evitts Creek watershed is a sediment loading threshold, which is set at the 50th percentile of the forest normalized reference sediment loads. The watershed modeling results show that the Evitts Creek watershed sediment load is above the threshold. Therefore, the Evitts Creek watershed is considered to be impaired by elevated sediments.

Also, the Maryland Biological Stream Survey data indicate that the embeddedness scores are higher and epifaunal substrate scores are lower than those found in watersheds with a healthy biologic community. The distributions of these two sediment related physical habitat characteristics exhibit a deviation from the reference conditions and further support the conclusion of a sediment impairment.

It is correct that the higher embeddedness scores in the Evitts Creek watershed are in the more developed areas. Likewise, the TMDL load reductions are highest for the developed land use. Independent of land use characteristics, water quality standards require that streams must support their designated uses. This TMDL

establishes a sediment load at a level that is indicative of satisfactory water quality (per Maryland's biocriteria).

The Chesapeake Bay Program Phase V watershed model used for the purpose of this TMDL does not explicitly capture the processes of stream bank or bed erosion; however, the effects of these are implicitly included in the underlying assumptions. The model is defined as lumped because many physical processes are combined into a single value and/or factor. The text in the general loading methodology section has been updated to better describe the watershed model.

For example, in urban or developed land use areas, the sediment yield is estimated from the percentage of impervious area, where the yield increases with increasing imperviousness. Because the terrestrial sediment source decreases with a growing impervious area, it is assumed that the additional sediment yield is driven by increased flow, which results in channel erosion. In non-urban land uses, erosion from the landscape is considered to be the primary sediment source; however, it is widely recognized that not all eroded sediment is transported to the stream system. This depositional effect is captured using a sediment delivery ratio, which is the proportion of the terrestrial erosion that reaches the stream system.