



**Chesapeake Bay Program**  
**SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE**  
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November 14, 2012

RE: STAC Healthy Watersheds Workshop Report

Larry Merrill  
Water Quality Goal Implementation Team Chair  
1650 Arch Street  
Philadelphia, PA 19103

Cc: Nick DiPasquale, Chair, Chesapeake Bay Program Management Board; Gary Shenk, Modeling and Monitoring Analysis Coordinator, Chesapeake Bay Program; Bill Dennison, Chair, Scientific Technical Analysis and Reporting (STAR).

Dear Mr. Merrill,

Please see the attached STAC workshop report entitled, “The Role of Natural Landscape Features in the Fate and Transport of Nutrient and Sediment.” This report provides a summary of STAC’s March, 2012 workshop. The report also includes recommendations identified by workshop attendees. Attendees recommended the following:

- The CBP should pursue upgrades to the Chesapeake Bay Program Watershed Model to provide more accurate estimates of nutrient and sediment loading rates based on the considerations discussed in the report. The recommendations include:
  - a. Adding three new land use classifications including riparian forest, forested floodplains (in general, these are wider and closer to water table than riparian forests), and other wetlands.
  - b. Adjusting loading rates for the new land use classes based on spatially explicit landscape attributes, including directional connectivity, multi-direction flow fields, and flow path analysis.
  - c. Adjusting loading rates for the new land use classes based on landscape feature attributes including type, condition, and possibly forest age.
- The CBP should use scenario analysis to identify the most effective landscape features and the most effective configurations of features.
- The CBP should consider investing in watershed models for use at the local scale.

This report will help the Bay Program continue to evaluate and improve the scientific basis for nutrient and/or sediment loading rates from natural landscape features in the Chesapeake Bay

Program Watershed Model based on ecological health/condition, management status, and/or landscape position.

Inclusion of such considerations to the watershed model are likely to increase model accuracy, and improve the base of knowledge that can be used to target natural resource conservation investments to areas on the landscape that provide the highest water quality benefits.

We hope these recommendations are useful, and STAC looks forward to your feedback. STAC respectfully requests a written response to the above specific recommendations from the GIT 3 Chair by Monday, January 14, 2013.

Please direct any questions you may have about this report and its recommendations to me, the Chesapeake Bay Program's Maintain Healthy Watersheds Goal Implementation Team Chair, Mark Bryer (The Nature Conservancy), and Coordinator, Mike Fritz (EPA/CBPO).

Sincerely,

A handwritten signature in blue ink that reads "Chris Pyke". The signature is written in a cursive, flowing style.

Chris Pyke  
Chair, Chesapeake Bay Program's Scientific and Technical Advisory Committee