# Stream Restoration Crediting for Meeting Sediment and Nutrient Goals in the Chesapeake Bay



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## Summary of 6-Month Test Drive Results

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*A Watershed Partnership*

# Stream Restoration Protocol Revisions

- WQGIT approved initial Protocols on May 13th 2013
- Presented 6-month test drive changes to WQGIT at May 12th 2014 meeting
- WQGIT wanted more time to review especially Technical Appendix
- USWG approved revisions on January 17th 2014
- WTWG approved revisions on August 28th 2014

# Main Concerns Identified during the "Test-Drive" Review Process

- **General Concerns**
  - The default rate could conceivably lead to load reductions that can exceed watershed loading rates and may preclude the use of protocols 1 - 3.
  - Found mistake for TN and TSS and made corrections.
  - Added "the WTWG recommended that the aggregate load reductions from a practice should not exceed estimated loads in the Watershed Model for any given land-river segment. "
  - Confusion over application of the sediment delivery ratio and how it is applied to nutrients.
  - Sediment delivery ratio integrated into interim rate and Protocol 1 for coastal plain (0.061) and non coastal plain (0.181)
  - There are currently no mechanisms in the CBWM to adjust model parameters to account for enhanced instream nutrient uptake and/or denitrification associated with stream restoration.
  - The WTWG recommended the Chesapeake Bay Program develop estimates of nutrient attenuation in small streams prior to calibration of the Phase 6 Watershed Model.

# Main Concerns Identified during the "Test-Drive" Review Process

- **Protocol 1 Concerns**
  - The BANCS method may not be accurate and regional curves have not been developed.
  - Gave jurisdictions flexibility to use alternative methods
  - The 50% efficiency requirement is too low.
  - Allowed for higher credit if supported by monitoring
- **Protocol 2 Concerns**
  - Certain types of projects result in load reductions that can exceed watershed loading especially for Protocol 2.
  - Added "WTWG recommended the 40% cap be placed on total nitrate loads entering the stream for any given land-river segment rather than total nitrogen loads as denitrification only impacts nitrate.
- **Protocol 3 Concerns**
  - The curves used to develop Protocol 3 are not accurate enough for design purposes.
  - Confusion over how upstream BMPs will affect load to the project and subsequently the credit received.
  - Runoff reducing BMPs already accounted for in design.
  - Recommendations for verification include accounting for upstream BMPs implemented