DRAFT

Legacy Sediment Workgroup Meeting Notes
February 15, 2006

Meeting Attendees:
Doug Brennan – DEP
Pat Buckley – DEP
Harry Cambell – CBF
Scott Carney – PFBC
Scott Cox – DEP
Jeffrey Hartranft – DEP
Dennis Stum – DEP
Curtis Schreffler –USGS
Elam Herr – PSATS
Lewis Linker – EPA
Patricia McSparran – DEP
Dorothy Merritts – F&M
Ward Oberholtzer – Landstudies, Inc.
Kenn Pattison – DEP
Andrea Sharretts – PA Farm Bureau
Ann Smith – DEP
Jim Spontak – DEP
Bob Walter – F&M
George Wolff – Wolff Strategies

Meeting Notes:

Introductions-Meeting Purpose

- Briefly reviewed history of the Bay Program including the nutrient and sediment reduction goals to attain the uses and criteria developed by EPA in 2003.
- The Chesapeake Bay Steering Committee recommended establishing a workgroup to explore issues dealing with nutrient and sediment contributions from legacy sediment.

Merritts and Walters Presentation-Questions, Discussion, Comments

- How much of the sediment is background from natural processes of soil erosion?
  Answer-Bank erosion of legacy sediment upstream of former dams is severe. Below former dams is less. Bed scour depth is to bedrock in some cases and presettlement surfaces are already eroded.
- What is proportion of modern sediment transport?
  Answer-A conservative estimate of 50% is from bank erosion of legacy sediment.
- Comment: Cumulative events have contributed to the problem, including but not limited to dams. General group consensus.
- What are some methods used to distinguish between post and pre land settlement sediment?
  Answer- Radio carbon date the sediment and organic layer beneath the sediment. Pollen can also be used to distinguish between pre and post settlement. Gravel layer that is beneath the organic layer (swamps) contains abundant angular quartz.
- Comment: The role of nitrogen and bank erosion of legacy sediments needs to be better understood and further verified. Nitrogen inputs from groundwater during baseflow are contributing and proportions from all sources of nitrogen need further verified.
- Has the research been published and peer reviewed? The work has been presented in numerous lectures and forums. The work has been submitted for publication in a prestigious, peer reviewed journal.

General Workgroup Discussion and Comments

- A recommendation was made that this Workgroup be aware of the STAC Responsive Workshop Proposal being planned for the spring of 2006. Merritts and Walter were identified as potential presenters. Comments on the STAC Workshop Proposal are due by February 20, 2006. DEP POC - Pat Buckley. Recommendation that someone from this Workgroup sit in on Steering Committee for STAC Workshop.
- Legacy sediment will affect the Chesapeake Bay Program Model. How?
  The Model requires an identifiable load. Legacy sediment would need to be developed as a new load. Accounting for legacy sediment in the Model is realistic. EPA would like to discuss options with Dorothy Merritts and Bob Walter.
- Education and outreach regarding the role of legacy sediment is critical to implement measures to address the issues.
- The Bonchek Policy Forum identified public outreach as critical to dealing with legacy sediment issues. The Forum also recommended incentive recognition and development to address legacy sediment issues.
- The pre-settlement function of streams, floodplains, and wetlands needs to be understood to recognize the impact that legacy sediment has had on them (beds are 3-15 feet higher now, streams are disconnected from groundwater, little denitrification occurs, it is difficult for fish to spawn, etc.). This is a part of the education and outreach.
- The most long-term and sustainable solution recommended is stream and floodplain restoration to as near a natural (pre-settlement) condition as possible. Restoration of pre-settlement conditions has a potential to address nutrients from sheetflow, groundwater and air and provide the most effective strategy.
- The Workgroup should work towards in the ground solutions, as well as accounting in the Chesapeake Bay Program Model.
- The implications for recognizing and addressing legacy sediment issues are far reaching into many State and Federal programs including permitting and removal of dams, stream restoration projects, and programs addressing nutrient and sediment reduction.

Definition of Legacy Sediment

- Historic sediment that has buried pre-settlement floodplains. (could also be- Historic sediment that has eroded and buried pre-settlement floodplains.

Workgroup Short-term Goals

- Comment on proposed STAC Responsive Workshop Proposal. Participate in STAC Workshop.
- Support continuing research of legacy sediment and the role it plays in nutrient inputs to the Chesapeake Bay.
- Identify research needs and data gaps necessary to develop a PA Chesapeake Bay Tributary Strategy Best Management Practice (BMP) and find a funding source.
- Review and comment on initial Legacy Sediments Workgroup - Issues Identified by the PA Chesapeake Bay Tributary Strategy Steering Committee during meetings in January 2006 (Copy provided as a handout). Provide comments to Jeff Hartranft prior to next meeting.

Workgroup Long-Term Goals

- Determine the nutrient and sediment load from legacy sediment in the model.
- Develop a PA Chesapeake Bay Tributary Strategy BMP for floodplain restoration based upon current and future research findings regarding legacy sediment.
- Develop a PA Chesapeake Bay Tributary Strategy BMP efficiency by sometime in 2008.

Next meeting will be held on February 27th from 12:30-3:30 at the PFBC office in Harrisburg. It was suggested that Kenn Pattison present the process to develop a floodplain restoration BMP efficiency for EPA's Chesapeake Bay Program Watershed model at this meeting.