

**Beneficial Effects of Healthy Watersheds on Pollutant Fate and Transport:  
A CBP STAC workshop to examine how natural landscape features protect water quality  
Tentative Workshop Dates: March 7-8, 2012**

**Tentative Workshop Location: Claggett Retreat Center 3035 Buckeystown Pike, Buckeystown, MD**

**Purpose of the workshop**

*To examine and discuss how important attributes such as natural variation within a feature class, anthropogenic degradation, management status, and spatial factors (e.g., hydrologic connectivity, location in watershed.) affect how nutrient and/or sediment retention/loading rates are assigned to natural landscape features (wetlands, forests, riparian buffers, and streams, including hyporheic zones) within the Chesapeake Bay Watershed Model.*

**General Workshop Guiding Questions**

- *How can we improve quantification of nutrient and sediment retention/loading rates of existing forests, wetlands, riparian buffers, and streams, including hyporheic zones, in the Chesapeake Bay Watershed?*
- *How can the beneficial effects of existing forests, wetlands, riparian buffers, and streams, including hyporheic zones, in the Chesapeake Bay Watershed be credited by the Bay TMDL?*

**Agenda Organization**

*In order to investigate the potential water quality benefits of multiple, existing landscape features and gain a better understanding of the way these benefits are currently modeled by the Chesapeake Bay Program, workshop speakers have been organized into the following panels:*

- *Forests/Riparian Buffers Panel*
- *Streams Panel*
- *Wetlands Panel*
- *Landscape Ecology Overview*
- *Chesapeake Bay Watershed Model Panel*

**March 7, 2012**

**9:00 am**      **Breakfast (Provided)**

**10:00 am**      **Welcome – Mark Bryer, The Nature Conservancy**

**10:15 am**      **Why does this all matter? – Ann Swanson, Chesapeake Bay Commission (**CONFIRMED**)**  
*Swanson will address the underlying policy issues that this workshop seeks to inform.*

**10:30 am**      **Healthy Forests/Riparian Buffers Panel – Richard Lowrance, USDA-ARS (**PROPOSED**); Bern Sweeney (Stroud Center) (**CONFIRMED**); Don Weller, Smithsonian Environmental Research Center (**CONFIRMED**)**

*Speakers will address the following questions with regard to the functioning of healthy forests/riparian buffers:*

- *How well can we estimate forest and riparian buffer nutrient and sediment retention/loading rates - and the variability in those rates as a function of the landscape feature's condition/quality/health, including anthropogenic impacts/degradation?*

- *How can we quantify/classify the condition/quality/health of the landscape feature with respect to nutrient and sediment loading/retention rates?*

**12:00 pm      Lunch (Provided)**

**1:00 pm      Healthy Streams Panel** – Paul Bukaveckas, VCU (**CONFIRMED**); Keith Eshleman, UMCES (**PROPOSED**); Durelle Scott, VT (**CONFIRMED**)

*Speakers will address the following questions with regard to the functioning of healthy streams:*

- *How do nutrient and sediment retention/loading rates vary as a function of the landscape feature's condition/quality/health, including anthropogenic impacts/degradation?*
- *How can we quantify/classify the condition/quality/health of the landscape feature with respect to nutrient and sediment loading/retention rates?*

**2:30 pm      Break (Provided)**

**2:45 pm      Healthy Wetlands Panel** – Scott Ator, USGS (**PROPOSED**); Robert Brooks, PSU (**PROPOSED**); Greg Noe, USGS (**CONFIRMED**); Denice Wardrop, PSU (**PROPOSED**)

*Speakers will address the following questions with regard to the functioning of healthy wetlands:*

- *How do nutrient and sediment retention/loading rates vary as a function of the landscape feature's condition/quality/health, including anthropogenic impacts/degradation?*
- *How can we quantify/classify the condition/quality/health of the landscape feature with respect to nutrient and sediment loading/retention rates?*

**4:15 pm      Closing Remarks** – Mark Bryer, The Nature Conservancy

**4:30 pm      Recess**

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**March 8, 2012**

**9:00 am      Breakfast (Provided)**

**10:00 am      Welcome** – Mark Bryer, The Nature Conservancy

**10:10 am      Landscape Ecology Overview** – Dean Urban, Duke (**PROPOSED**); Laurel Larson, USGS (**CONFIRMED**)

*Speakers will address how the arrangement of landscape features, landforms, “critical zone” characteristics and natural landscape attributes (patch, landscape matrix, and corridors) affect nutrient and sediment retention rates.*

**11:15 am      Chesapeake Bay Watershed Model Panel** – Gary Shenk, EPA-CBPO (**CONFIRMED**)

*Shenk will address how the current Chesapeake Bay Watershed Model estimates nutrient and sediment loading rates of the natural landscape features (forests, wetlands, riparian buffers, streams, including*

*hyporheic zones) and discuss opportunities to include improved simulation of these features in the current or future versions of the model. Specifics of the calculation of the TMDL will also be discussed.*

**12:30 pm      Lunch (Provided)**

**1:30 pm      Breakout Discussion Session Groups**

*Participants will break into groups to address the following questions:*

- *What recommendations can be made for incorporating significant results from the previous panel discussions into the Chesapeake Bay Watershed Model?*
- *What recommendations can be made for incorporating significant results from the previous panel discussions into the Chesapeake Bay TMDL crediting framework? **(THIS NEEDS TO BE DISCUSSED FURTHER AND SPECIFIC BREAKOUT SESSION TOPICS AND QUESTIONS NEED TO BE DRAFTED).***

**3:00 pm      General Session Discussion **(THIS NEEDS TO BE DISCUSSED FURTHER AND SPECIFIC SESSION TOPICS AND QUESTIONS NEED TO BE DRAFTED)****

**4:00 pm      Concluding Remarks – Mark Bryer, The Nature Conservancy**

**4:30 pm      Adjourn**