Review of trading programs' design elements to address uncertainty

Trading and Offsets Workgroup October Conference Call
October 17, 2012
Evan Branosky

Sources of uncertainty

- "Nonpoint source uncertainty" could arise from

    - Verification (i.e., determining whether BMP is installed and maintained correctly)

    - Time required to realize anticipated load reductions

    - Variance in site-specific factors, such as soil type, rainfall, and slope

    - Presence of sufficient number of efficiency studies

    - Variance in reported pollutant-removal efficiencies among studies

    - Other?

Options for addressing uncertainty

- USEPA's 2003 Final Water Quality Trading Policy lists options to account for "nonpoint source uncertainty." Options include

  - Monitoring to verify load reductions

  - Use of greater than 1:1 trading ratios between nonpoint and point sources

  - Using demonstrated performance values or conservative assumptions in estimating the effectiveness of NPS management practices

  - Using site- or trade- specific discount factors

  - Retiring a percentage of NPS reductions for each transaction or predetermined number of credits

  - Establishing a reserve pool of credits to compensate for the quantity of credits that are actually generated

  Bay jurisdictions use different combinations of these options.

More reason to focus on ratios (discount factors)

- USEPA plans a technical memoranda on Trading Ratio based upon Uncertainty

- The Virginia State Water Control Board plans to reevaluate its trading ratio prior to July 1, 2013

Bay programs' ratios

Feature	Maryland	Pennsylvania	Virginia
Delivery ratio	• The CBWM provides each trading program's delivery ratio.		
Edge-of-segment ratio	• The CBWM provides each trading program's edge-of-segment ratio.		
Reserve ratio	• None	• 10 percent for all certified credits	• None
Retirement ratio	• 5 percent for credits generated by point sources • 10 percent for credits generated by nonpoint sources	• None	• None
Uncertainty ratio	• ≥ 10 percent for credits generated by nonpoint sources using BMPs not approved by the CBP	• None	• 100 percent for offsets generated by nonpoint sources (i.e., 2:1 ratio)

Source: Branosky et. al 2011