A science-based nonprofit working to strengthen private and public sector efforts to reduce nutrient pollution of rivers, lakes and coastal waters

Ecosystem Service Verification for Water Quality Trading Credits

Drivers

- Ecosystem markets need pre-assessment planning to determine performance relative to state baselines and identify practices or management changes that may generate "tradable" credits
- Expectation of reducing/offsetting "nutrient footprint" by consumers and the supply chain
- Need to position operation to meet state and federal water quality expectations/ requirements.

Our Approach

- Science- and performance- based
- Farm or tract level pre-assessment and verification of practice or system implementation
- Independent, verifiable, accountable and credible

Water Stewardship Ecosystem Services Assessment for Agricultural and Urban Water Quality Load and Reduction Credit Estimation

- Focus is on credit estimation and certification for emerging water quality trading markets.
- WSI conducts pre-assessments for owners or investors desiring to estimate the potential for generating tradable water quality credits on agricultural properties.
- WSI assessment services verifies implementation of state baselines, provides credit generation estimates after practice implementation and conducts annual reviews to document continued operation and maintenance as defined by the trading contract.
- WSI is providing assessment and verification services to the Chesapeake Fund and Chesapeake Eco-Finance Corporation and is developing service agreements with other organizations.

The Nutrient Loss Estimator (NLE ©WSI 2009), developed by Water Stewardship, Inc, calculates nutrient loads from agricultural and urban tracts and then estimates reductions that would be expected from implementation of practices or practice systems. The methodology and land use loads used are based on the Chesapeake Bay Program's Phase 5.3 Watershed Model, which is the basis for TMDL loads and trading programs in most Bay states.

The NLE enables WSI to create numerous scenarios during pre-assessments of agriculture and urban projects. Conservation opportunities can be evaluated by selecting the BMPs most appropriate to the functional use of the property and the unique characteristics of the soil and water resources.

Once owner-selected practices are implemented, WSI can verify the proper implementation, operation and maintenance of the practices, estimate credit generation and conduct annual reviews. Summarized results provide quantified estimates of pre-BMP loads, post-BMP loads, reduction in pounds and percent.

The WSI Team:

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