Verification of Nutrient & Sediment Controls in the WIPs

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Verification - Focus of Presentation

- Verification guidelines.
- Key Information to include in the WIPs.
- Factors to consider in verifying controls.
- Discounting benefits of controls based on confidence level.

EPA Financial Support for Developing Verification Protocols

- $9.1 million Chesapeake Bay Implementation Grants
- An additional $11.2 million for Chesapeake Bay Regulatory and Accountability Program
  - Improve tracking and accountability

Overarching Question to Answer

- What are the assurances that states/District will achieve the expected nutrient and sediment load reductions from reported controls/practices.
- What are the **procedures for tracking, reporting, and verifying** that practices (regulatory, contracted, and voluntary) are properly designed, installed, and maintained over the lifespan of the practice according to agreed-upon practice standards?

Verification Guidelines & Key Information to Include in WIPs

WIP Elements

- 1. Target Loads
- 2. Loading Baseline and Program Capacity
- 3. Account for Growth
- 4. Gap Analysis
- 5. Commitment/Strategy to Fill Gaps
- 6. Tracking and Reporting
- 7. Contingencies
- 8. Detailed targets and schedule

Reasonable Assurance
(November 4, 2009 Memo)

- Both Point and Nonpoint Source controls need to be verified. Nonpoint sources are the greatest challenge.
- The Bay TMDL should provide “reasonable assurance” that nonpoint source controls will achieve expected load reductions in order for the TMDL to be approved.
- EPA needs to be sure that load allocations are not based on too generous assumptions regarding the amount of nonpoint source reductions that will occur.

Verification Guidelines
(December 29, 2009 Memo)

- To ensure full credit in the model for nutrient/sediment reductions, States/District are responsible for:
  - ensuring that pollution controls are properly installed and maintained.
  - including in annual reporting the specific mechanisms to verify that information.

- EPA will work with States, District, and local governments to design and implement a process … **to credit only that portion of pollutant removals for which the jurisdictions can provide verification** that reported practices and/or controls are being appropriately designed, installed, and maintained.

Information Needs - Data Tracking
(April 2nd Guide)

- Procedures for ensuring data are consistent with CBP-approved BMP definitions and efficiencies used in Phase 5.3 Model. If not…
  - Commit to take practice through CBP-approval process.
  - Provide interim definition and effectiveness estimate and adjust WIP once practice is approved.
  - (Or consider steps to bring practice up to level of CBP-approved definition)
- Procedures for ensuring practices reported as "new" didn't previously exist.
- Procedures for ensuring no **double-counting**.
- Procedures for removing data for practices whose lifespan has expired, that are not functioning as designed, or that no longer exist, etc.

Information Needs - Verification
(April 2nd Guidance)

- Procedures for tracking and verifying that regulatory, contracted, and voluntary practices are properly designed, installed, and maintained over the lifespan of the practice.
  - Who conducts verification
  - Types of verification
  - Frequency of inspections
  - Percent of sites inspected
  - Penalties for improper installation/maintenance
    - Past performance and proposed performance
  - Funding/staff/capacity for inspection/verification

Factors to Consider in Verifying Controls
- Building a Level of Confidence

Level of Confidence is Dependent on…

- Source of Data
- Certification and Training Protocols
- Design, Operation and Maintenance Protocols
- Oversight, Inspection, Compliance, Enforcement Protocols
- Data Tracking and Reporting Protocols

Sources of Data

- Monitoring Data – Point Source DMR Report
- Control/Practice Data
  - Government – EPA, USDA, State environmental and agricultural agencies, conservation districts, etc.
  - NGO's – environmental and sector-based
  - Private Sector – environmental and sector-based
  - Owner/Operator – self-reporting

Certification and/or Training

- What is the **protocol** for certification and training to ensure these practices are properly designed, implemented and maintained?
- **Who** is designing and inspecting these practices? What are their **qualifications**?
- What steps are in place to ensure practices are designed according to approved practices in the Model?
- What kind of **certification and training** are they getting?
  - Are there QAQC procedures in place to check their work?
  - Are there regular updates on certification?

Design, Operation and Maintenance

- What is the **protocol** for ensuring effective design, operation and maintenance of the controls?
- Are there **post-implementation compliance inspections** by qualified inspectors?
- What **procedures are in place to correct** any problems?
- What procedures are in place to **adjust reported data** if controls aren’t performing to expected levels?

Oversight and Inspection Compliance and Enforcement

- Are sites/controls **inspected**?
- **Who** is inspecting and what are their **qualifications**?
- **When** are inspections conducted? Design phase, installation phase, operation phase, throughout lifespan of control, etc.
- What is **% of controls inspected**? **Site Selection**?
- What is **track record of past compliance rates** and are data publicly available?
- What are past and proposed **consequences/penalties** for non-compliance?
- What is procedure for **adjusting reported data** on practices if they aren't operating at full nutrient/sediment reduction potential or are no longer functional?

Voluntary Practices

- Equity - need same level of accountability and rigor as other practices using CBP-approved protocols.
- Confirm that consistent with model practices.
- Confirm proper design, maintenance, operation.
- Confirm that not already reported.
- If doesn't meet model definition:
  - Offer interim definition and effectiveness estimate.
  - Commit to running practice through CBP-approved protocol.
  - Or work to enhance practice to EPA-approved level

Factors in Building Level of Confidence

Level of Confidence

High

Low

HIGHER CONFIDENCE, IF…

Contracts/Agreements for CBP-approved Controls
Certified professionals approving design, installation, O&M, throughout lifespan of practice.
Strategic inspections throughout life of controls.
Motivating penalties for non-compliance.
Track record of fixing compliance problems.
Mechanisms for adjusting reported data.
Plan in place for developing definitions and effectiveness estimates for new or voluntary practices.

LOWER CONFIDENCE, IF…

Insufficient detail in WIP to make an assessment.
No/Low assurance that practices are designed according to CBP-approved practices.
No/Low assurance that practices are properly operated and maintained to meet nutrient/sediment reduction expectations.
No/minimal inspections.
No/insufficient plan for cleaning up data.