



# CBP Partnership's BMP Verification Review Panel: Final Report

Dana York, Chair,  
CBP BMP Verification Review Panel

September 28, 2015 CBP WQGIT Conference Call

# Who is the Panel?



# Who is the Panel?



Dana York, Chair	Green Earth Connection
Curtis Dell	USDA Agriculture Research Service
Mike Gerel	Sustainable Northwest
Tim Gieseke	Ag Resource Strategies
Rebecca Hanmer	Retired, U.S. EPA
Dianna Hogan	U.S. Geological Survey Eastern Geographic Science Center
Richard Klein	Community and Environmental Defense Services
Andrew Sharpley	University of Arkansas
Tom Simpson	Water Stewardship, Inc.
Gordon Smith	Wildlife Works Carbon LLC
Rebecca Stack	District of Columbia Department of Energy and Environment
Robert Traver	Villanova University, Department of Civil and Environmental Engineering
Dan Zimmerman	Warwick Township

# What Has the Panel Produced Over the Past 3 Years?

- Extensive verbal and written feedback
  - Focused on principles, framework, workgroup verification guidance, and jurisdictions draft verification program plans
  - Through 8 conference calls and 5 face-to-face meetings
- Review Panel's Guidance and Recommendations to the Six Source Sector Workgroups, the CBP BMP Verification Committee, and the Seven Watershed Jurisdictions – November 2013
- Initial Feedback on Jurisdictions' Draft BMP Verification Program Plans – August 2015
- Final Feedback on Jurisdictions' Draft BMP Verification Program Plans – September 2015
- Final Recommendations for Strengthening Verification of Best Management Practices Implemented in the Chesapeake Bay Watershed – October 2015



# Partnership's Independent Review Panel Feedback on States' Draft BMP Verification Plans – August 2015

	DE	MD	WV	VA	PA	NY	DC
Agriculture							NA
Forestry							
Stream Restoration							
Urban Stormwater							
Wastewater							
Wetlands							
KEY:		= Predominately consistent with Sector Guidance and Verification Principles.					
		= Notable gaps and some inconsistencies compared to Sector Guidance. States must fill gaps to be in agreement with Sector Guidance and Verification Principles.					
		= Inadequate or does not follow Sector Guidance or meet many Verification Principles. Missing substantial amounts of information or may need to change approach.					

# Review of Panel's Evaluations

## ■ **Delaware:**

- Submitted the best draft plan, well documented, easy to read and understand
- Developed plan working with local stakeholders and array of state agencies



## ■ **Maryland:**

- Solid documentation of a proactive agricultural verification program that meets, even exceeds the Partnership's guidance in the basinwide framework
- Completely missed providing documentation for other sectors where we know they have solid programs

# Review of Panel's Evaluations

## ■ West Virginia:

- Well written, yet concise descriptions of current/proposed verification protocols
- Not planning ag verification beyond federally cost shared programs and inspections/spot checks by NRCS due to resource constraints



## ■ Virginia:

- The Panel has a number of questions about what Virginia was proposing particularly for agriculture—moving to a 1% subsampling (compared with MD and NY at 10%)—and stormwater
- Provided minimal to no documentation for several sectors

# Review of Panel's Evaluations

## ■ **Pennsylvania:**

- Panel complimented PA for being upfront on recognized gaps in their draft plan but Panel wanted a timeline to address gaps
- Provided solid, readable plan
- Good approaches on agriculture and forestry verification, but completely missed stream restoration, urban stormwater, and wetlands



## ■ **New York:**

- Solid documentation describing a proactive approach to agricultural verification—planning 100 percent on-site inspections for all reported BMPs
- Provided only documentation on data tracking and reporting for the rest of the five sectors



# Review of Panel's Evaluations



- **District of Columbia:**

- The Panel knew DC has solid BMP verification underway for wastewater, stormwater, and stream restoration
- DC provided strictly documentation on their excellent urban stormwater and wastewater data tracking and reporting systems, but nothing on BMP verification.

# Good Examples to Follow

- **Delaware:**
  - Overall format and content
  - Delaware's comprehensive tabular listing of BMPs by major sector
- **West Virginia:**
  - Overall format and content
  - Status of their wastewater treatment facilities meeting their WIP commitments
- **Pennsylvania:**
  - Documentation of quantifying priority BMPs and linking them to WIP goals
  - Format provides an excellent level of transparency
- **Virginia:**
  - Comprehensive table of all proposed statistical confidences
  - Urban nutrient management verification protocols
- **New York:**
  - Description of training for agriculture personnel involved in the AEM program and technical staff involved in wastewater treatment facility permit compliance
- **District of Columbia:**
  - Transparency and public access to urban stormwater data
- **Maryland:**
  - Agricultural verification protocols and tables
  - Proposal for an independent Ag-verification team



# Achievement of Partnership's Verification Principles

- **Practice Reporting:** Several states do not include specific provisions for inspection and verification in their protocols – and only provided how they collect and transmit data to the Bay Program Office



- **Scientific Rigor:** Statistical sampling without jurisdiction-specific justification—such as accepting others' methods, i.e. NRCS 5%—may not contain the required robustness or meet the jurisdictions' WIP requirements
- **Public Confidence:** States that used the suggested data-filled tables and concise narratives could be more easily understood by a layman

# Achievement of Partnership's Verification Principles



- **Adaptive Management:** The Panel urges more conversation about what adaptive management entails at the practice and protocol level and how it will specifically be applied to verification within the various funding/staffing levels
- **Sector Equity:** If states follow the sector workgroups' guidance published in the Partnership's Basinwide BMP Verification Framework, most of the time sector equity should be achieved

# Formatting and General Content

- The Panel asked that EPA now require the states and the District to **follow the recommended formats and content**
  - Table 8 from the Basinwide BMP Verification Framework
  - Good examples: Delaware and West Virginia
  - This format will improve the readability by a wider audience
- The Panel strongly encourages jurisdictions to **provide answers to all the questions** posed in all six sector-specific sections of the evaluation form
  - Particularly for wetlands and stream restoration protocols



# Statistical Sampling Approaches and Practice Prioritization

- **Appropriate use of statistical-based sampling design is an issue that needs more attention** by the jurisdictions and the Partnership's Statistical Design Review Team convened by Virginia Tech



- The Panel asks for:
  - Documentation of the **process and rationale** for how a statistical subsampling percentage was selected, anytime one is used—e.g., 5 percent
  - Emphasis placed on documenting the **criteria for subsample selection** and how that percent subsampling meets the jurisdiction's own WIP and verification objectives and achieves the Verification Principles

# Statistical Sampling Approaches and Practice Prioritization

- While the Panel recommends the prioritization of BMPs, they note that **verification protocols must be developed for all BMPs that a jurisdiction plans to report**
  - The Panel asks for:
    - A specific timeframe for providing verification protocols for these low and medium priority BMPs
    - A description of the envisioned level(s) of verification realizing the Framework allow less vigorous levels of verification for these practices
- Most jurisdictions only committed to **verifying cost-shared practices**
  - The Panel recommends the jurisdictions consider verifying non-cost shared practices as well to ensure these practices receive appropriate credit for landowner investments



# Practice Inspections

- **Training requirements for inspectors** were not clearly documented throughout the verification program plans
- Procedures for deciding whether or not to “**restart the clock**” on a practice lifespan, or to perform corrective maintenance on a BMP, need to be clearly documented
- A clearer distinction between the verification approaches for erosion and sediment control for **active construction** and stormwater management for **post-construction** BMPs should be provided.
- **BMP expert panels** should be charged with providing their professional recommendations for:
  - 1) The type and frequency of the initial inspection; and
  - 2) Details regarding follow-up inspections/visits





# Enhancing Existing Programs



- The Panel strongly encourages the jurisdictions to **move beyond simply documenting their current programs**, and strive for actual enhancements to their verification programs
  - Not just focus on changes to their program but whether or not the jurisdiction's program meets the sector guidance and the BMP principles
- The Partnership needs a process to address **gaps in the existing BMP verification guidance** well into the future
  - The **sector workgroups need to take on responsibility** for review/approval of all new or alternative BMP verification approaches
- Verification procedures for BMPs owned or operated by **Federal agencies, facilities and landowners** were essentially absent from the jurisdictions' initial draft BMP verification program plans and needs to be addressed by jurisdiction's AND the Federal Agencies

# Selected Panel Members' Final Feedback

(See full Panel Report for all comments)

- “State Verification Protocols must have the: Right amount of Rigor to Reliably Report BMP’s within the Reality of Resources (6 R’s).”



- “Greater harmonization of data exchange among government agencies, both federal and state, will facilitate BMP verification.”
- “Adequate flexibility and funds must be provided for jurisdictions to innovate and pilot new ideas that work best for their circumstances.”

# Selected Panel Members' Final Feedback

- “BMP Verification should evolve toward BMS Verification (Best Management Systems) to capture the seasonal and yearly output and outcomes of a field/farm/urban/forest/wetland area.”



- “To improve practices, verification needs to be carried out in conjunction with on-the-ground assessment and technical assistance as much as possible, especially in non-regulatory sectors such as agriculture and forestry.”
- “Outreach, public communication, and education on what BMPs do and why they are important needs to expand. “

# Selected Panel Members' Final Feedback

- “Assuring transparent and accurate (BMP meets definition) verification was, and remains, critical to achieving true long-term improvements in water quality and establishing public trust.”



- “A driving force behind this work is the principal of transparency, I hope jurisdictions produce verification program reports that are not overly dense, obscure, and jargon filled, but are digestible by the average citizen.”
- “To enable our ability to meet the Chesapeake Bay TMDL, the stormwater BMP inspections need to be designed to increase our knowledge of BMP longevity and design, and the abilities to Design, Maintain and Inspect BMP’s.”

# CBP BMP Verification Schedule

- **November 15th:** Jurisdictions submit their revised BMP verification program plans to EPA
- **December 15th:** EPA approves the jurisdictions' BMP verification program plans or requests specific changes prior to approval
- **2016-2017:** Two year 'ramp-up' period
- **2018:** Only verified practices will be credited in the future



# Panel “Asks” of the WQGIT

- Carefully read through and directly respond to the four sets of feedback provided:
  - Panel’s initial feedback – August 7<sup>th</sup>
  - Panel’s final feedback – September 4<sup>th</sup>
  - Sector Workgroup coordinators – September 4<sup>th</sup>
  - EPA Sector/WIP Leads & CBP QA Coordinator – September 4<sup>th</sup>
- Follow each sector workgroups’ guidance...or document clearly how you achieved the same end objective following a different path
- Follow the format/content examples provided by DE, WV, and PA
  - In a very limited number of pages, you can provide all the information the Panel recommends, consistent with the Framework



## Final Thought:



**“The correct balance between BMP implementation and verification has been achieved when the public can understand and appreciate the investment made by states in an effort to improve their local water quality”**

**- Dana York**

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Questions/Comments?