

Compilation of Comments on BMP Verification Received from the CBP Partnership's Citizens Advisory Committee with Updated Responses From Rich Batiuk, Chair, CBP BMP Verification Committee

Provided to the Citizens Advisory Committee Membership in Preparation for the May 15th 2014 CAC Meeting

December 17, 2012 CAC Letter to Nick DiPasquale

It is our understanding that this current verification process looks to fundamentally change, for the better, the way in which the CBP verifies the implementation of practices designed to reduce nutrient and sediment pollution. In this way, the CBP will significantly improve the accounting for reductions in the Watershed Model.

Changes to existing BMP tracking and reporting programs are needed and will be made because of:

- The number and depth of recommendations the Partnership has received from the BMP Verification Review Panel and factored into the framework report; and
- The BMP verification guidance coming forward from the six technical workgroup are collectively calling for levels of verification not reflected in existing jurisdictional programs.

Nick DiPasquale continues to reiterate his statements that the Partnership's work on BMP verification is an essential and foundational element to the success of restoration efforts. For example, see his March 21, 2014 Bay Journal article:

http://www.bayjournal.com/article/verification_of_efforts_effectiveness_critical_to_bay_cleanup

Those statements are backed up by EPA's drafting of an extensive set of evaluation and oversight commitments and procedures last year and successful securing of the buy-in of the BMP Verification Review Panel, the BMP Verification Committee, and the advisory committees. Those commitments and procedures are embedded within the May 9th revised draft framework report and will be part of the mechanisms for ensuring the changes to existing verification programs called for in the framework are instituted and maintained over time.

What remains unclear to us is the "who" and the "how" of the final decisions on any verification protocols. To have such decisions made by the PSC may not be prudent, given the state partners' repeated cries of inadequate funds and repeated defense of existing evaluative practices.

In previous correspondence it was noted that the Principals' Staff Committee would have the responsibility for approving each of the seven jurisdictions' BMP verification programs. At the joint meeting of the BMP Verification Committee and BMP Verification Review Panel on April 2, 2014,¹ there was full consensus that EPA should approve each jurisdiction's verification

¹ www.chesapeakebay.net/calendar/event/21522/

programs, not the PSC. That recommendation is embodied within the May 9th revised draft framework report. The PSC would still approve the basinwide BMP verification framework on behalf of the larger Partnership.

EPA must strengthen its role in providing guidance, direction and feedback on the level of verification it anticipates as sufficient to meet the reasonable assurance standard.

The BMP Verification Review Panel, not EPA, took the lead for strengthening the verification guidance developed by the six technical workgroups, actively using the five BMP verification principles as the basis for their extensive feedback and direction back to the six technical workgroups over the past two years. These external experts have provided several rounds of written feedback directed to the individual workgroups as well as their collective recommendations directed to the Partnership, the jurisdictions, and the workgroups. The Panel's recommendations are embedded throughout the May 9th revised draft framework report.

Currently, it remains unclear exactly who will determine the sufficiency of any proposed verification protocol.

From the start of the process to develop the basinwide verification framework, the Partnership put the BMP Verification Review Panel in the direct role of reviewing (three rounds to date) the six technical workgroup's drafts of their verification guidance (formerly referred to as protocols²). Throughout that review and feedback process, the BMP Verification Review Panel has relied on the Partnership's five verification principles as the bar on which to judge the 'sufficiency' of the workgroups draft verification guidance documents.

At its April 1, 2014 meeting, the BMP Verification Review Panel concluded that five of the six workgroup guidance documents were sufficient to provide the necessary perspective and guidance to the jurisdictions to support the jurisdictions development of verification protocols and programs. The BMP Verification Review Panel provided feedback and additional direction to the Agriculture Workgroup as that workgroup continues to revise and improve its draft verification guidance.

However, since the level of verification is directly linked to any finding of reasonable assurance, and since any credit given in the Model is directly tied to a determination of jurisdictional accomplishment of its TMDL pollution reduction goals, it is clear to us that the final decision-maker must be EPA.

EPA will be responsible for approving the jurisdictions' BMP verification programs.

The Agency also has the responsibility for assessing reasonable assurance of the jurisdictions' verification programs through the annual review and approval of each of the jurisdiction's quality assurance plans (where the jurisdictions' BMP verification programs will be documented) as conditions of award of the jurisdictions' Chesapeake Bay Implementation Grants and Chesapeake Bay Regulatory and Accountability Grants.

² In its November 2013 feedback to the Verification Committee, jurisdictions and workgroups, the BMP Verification Review Panel explained that the workgroups' documents are guidance for the states, while the states' selection documentation of their verification methods for groups of BMPs will serve as the specific verification protocols.

EPA still retains responsibility for ensuring full jurisdictional accountability to achievement of the nutrient and sediment load allocations embodied within the Chesapeake Bay TMDL through implementation of the jurisdictions' Watershed Implementation Plans and their 2-year milestones.

Verification is another, though extremely important, component of a larger accountability system. The Partnership and the public at large, not EPA alone, must have confidence in scientific rigor and transparency of the accountability system. Therefore, we must build this rigor and transparency for verification up through the Partnership and out through our many partners with implementation responsibilities, beyond the approval, evaluation and oversight responsibilities of EPA spelled out in the May 9th revised draft framework report.

The Verification Principles established by the BMP Verification Committee are broad principles crafted at the 10,000 foot level. There is a need for EPA to provide explicit implementation guidance to the source sector workgroups providing more specificity on how the Verification Principles must be utilized as they develop their protocols.

Over the past two years the six sector and habitat workgroups have risen to the challenge and crafted excellent guidance documents for use by the jurisdictions as they develop, enhance, and document their verification programs. The level and quality of the verification guidance was made possible through continual process of review, feedback, follow-up communication of direction, and then re-drafting among the Verification Review Panel and the six technical workgroups.

Of particular interest to us is the need for guidance delineating what is and is not sufficient transparency as required in the "Public Confidence" principle. Absent a significant level of heightened transparency in the verification process itself and the underlying data to support any conclusions; we will not meet the public confidence standard envisioned in the principle.

As a direct result of CAC's repeated call for heightened transparency, the BMP Verification Review Panel and the BMP Verification Committee have incorporated into the existing five verification principles an addendum to the Public Confidence principle spelling out an operational definition of transparency. Further, the Panel and Committee have drafted a series of implementation oriented recommendations for further building in transparency into how the jurisdictions will carry out their verification efforts well into the future. A specific example is the recommendation for:

Public Access to All Credited Practice Data. All practice and treatment data reported for crediting of nutrient and sediment pollutant load reductions and used in some form by the Partnership in accounting for implementation progress will be made publically accessible through the Partnership's [Chesapeake Stat](#) website. It is the Partnership's intent to look for opportunities to provide data at even more geographically specific levels as that data becomes available through the jurisdictions' enhanced BMP tracking, verification and reporting systems into the future.

Also to be included in the guidance, for example, should be an EPA implementation directive establishing that the level of "scientific rigor" will necessitate relational levels of credit

application in the model and that every protocol needs to recognize this “sliding scale” approach.

The BMP Verification Review Panel, the Verification Committee and sector/habitat workgroups have all concluded that there is insufficient data and underlying scientific understanding to develop a “sliding scale” approach to develop relational levels of credit in the Partnership’s Chesapeake Bay Watershed Model. Each of the workgroups have developed guidance that defines acceptable methods to verify specific groupings of BMPs. If the BMP is verified then it receives credit for the Partnership approved nutrient and sediment reduction efficiency in the applicable Partnership modeling tools.

In addition, EPA should use the findings of the BMP Verification Review Panel—the only wholly nonpolitical and scientific group engaged in the verification process—as weighted guidance in making its determination.

In convening the Panel, the Partnership publically committed to full consideration of the Panel’s findings and recommendations at each decision point in the implementation of a rigorous, transparent system of practice verification. To re-enforce that commitment, the following steps have been taken since the formal convening of the Panel:

- All Panel meetings and conference calls have been announced in advance, posted on the CBP Partnership’s web site calendar, have been full open to the public for their participation with extensive written summaries of each meeting and conference call posted on-line with the meeting/conference call presentation and advance briefing materials.
- The Panel has maintained a direct lines of communication—written and verbal—with the BMP Verification Committee, the BMP Verification Committee chair, the six workgroups’ chairs and coordinators.
- The Panel has and will continue presenting its recommendations and perspectives on the draft basinwide BMP verification framework directly to the Partnership’s advisory committees, Management Board and Principals’ Staff Committee so that these Partnership leaders and advisors hear directly from the Panel and not someone else’s summary of the Panel’s recommendations and perspectives.
- Several times over the past two years, the Panel has developed its collective sets of recommendations and direction and distributed those directly to its targeted audiences which have principally been the workgroup chairs and coordinators and the jurisdictions, via the BMP Verification Committee members.
- A joint meeting of the Panel and the BMP Verification Committee was held on April 2nd 2014 as a forum through which the Panel could communicate and discuss its recommendation directly with the Committee members and reach joint agreement what would be included in the basinwide framework report.

- The Panel's recommendations and guidance have been embedded into the May 9th revised draft framework report verbatim.

We also remain concerned with many specifics relating to the verification process. We have attached a list of these specifics.

As you can witness directly by reviewing the May 9th revised draft framework report and by the fact that we need to now significantly update our responses to your prior to letters, the CAC has had a direct and major influence on how the Partnership has gone about developing this basinwide verification framework as well as its content. Thank you for your sustained efforts to get the attention of the Partnership.

1) Reliance on use of the existing state verification protocols, the status quo, is not acceptable although it appears that many on the Agriculture workgroup support this approach.

None of the six watershed states' existing tracking, verification, and reporting programs for agricultural conservation practices implemented through cost share, regulatory, permitting, and non-cost mechanisms achieve all aspects of the Agriculture Workgroup's revised draft verification guidance embedded within the May 9th revised draft framework report. Approvable jurisdictional verification programs will require changes from the status quo.

2) Different levels of credit should be given in the model for different levels of verification.

a. As it is inevitable that achievement of a high level of certainty will prove difficult when applied to certain BMPs, the workgroup should endorse the concept of providing different levels of credit based on different levels of certainty. A sliding scale certainty/credit ratio system would allow for greater flexibility and greater accuracy.

As noted in our January 2013 response, the Partnership's two principal source sector workgroups—Urban Stormwater and Agriculture—both evaluated and then rejected recommending a sliding scale approach due to a lack of sufficient scientific data and information on which to establish such a scale. The Verification Committee and Verification Review Panel have since concurred with the workgroups' conclusion that there is a lack of data and an underlying scientific basis on which to establish such a scale.

b. It is not possible to pass the test of public credibility or the legal scrutiny of "reasonable assurance" by adoption of a procedure that allows BMPs verified by "self-certification" to be given the same credit in the model for pollution reduction as the same practice that has been verified by more stringent measures.

Self-certification, standing alone, is unlikely to meet the EPA's reasonable assurance measure. However, in combination with an effective auditing program, self-certification could be considered a viable approach to verification. Extensive training or other measures can also improve the viability of self-certification, depending on the practice being reported or the program.

c. Verification can include technical and qualitative measures.

All of the workgroups have considered technical and qualitative measures that may help their sector verify practices. As one example, the Chesapeake Stormwater Network has developed visual indicators for bioretention practices.³

d. The process for transparency must be clearly explained.

With the help (and urging) of the CAC, a recommended addendum to the public confidence BMP verification principle providing for an operational definition of how the Partnership will carry out transparency has been incorporated into the May 9th revised draft framework report. In addition, specific recommendations for how the jurisdictions should carry out the Partnership's commitment to transparency are in the May 9th revised draft framework report.

3) The new protocols must solve the problem of accounting for expired practices. How to remedy the existing situation where reductions from a BMP are included in the model after a contract period (for federal/state payment for implementation) has expired.

The BMP Verification Review Panel made it very clear in its recommendations and direction to the six technical workgroup and to the Partnership as a whole that the Partnership must deal with lifespans and removal of expired practices which have not re-verified as still present and operational. Explicit guidance and recommendations on this topics have been embedded throughout the May 9th revised draft framework report. In addition, the six technical workgroups were challenged to provide their source-sector or habitat specific guidance to the jurisdictions on this topic. Documentation of exactly how each jurisdiction will address lifespans and expired practices is a requirement of an approvable verification program.

4) The new protocols must solve the problem of double counting of existing practices. While there is the need to count all that is implemented, it must be clear that they are not counted twice.

A considerable amount of time has been dedicated to this subject by the Verification Committee, Verification Review Panel, and the sector/habitat workgroups. Led by the efforts of Dr. Dean Hively and Olivia Devereux, the U.S. Geological Survey has been actively working with Natural Resources Conservation Service, the Farm Services Administration, and the lead state agricultural departments and conservation agencies across the six states to develop state-specific procedures for eliminating double counting. The state-specific procedures for eliminating double counting are a requirement of an approvable verification program.

5) The verification concept under discussion by the Agriculture Workgroup involves a complex and not-yet transparent approach relating to "certainty"; the process for selecting any numerical certainty level must be transparent, clearly defined, and based on technically defensible information.

As a result of strong recommendations by the BMP Verification Review Panel, the Agriculture Workgroup has moved away from the above described approach. It became apparent that there was not enough science to fully develop this as a workable approach.

³ <http://chesapeakestormwater.net/2013/04/technical-bulletin-no-10-bioretention-illustrated-a-visual-guide-for-constructing-inspecting-maintaining-and-verifying-the-bioretention-practice/>

6) The ongoing complaint from the states that there is insufficient funding to implement new, more robust verification protocols should not be an excuse for lack of verification.

Funding cannot be used as an excuse for lack of verification. However, the Partnership's 'adaptive management' verification principle recognizes that funding does play a critical role in decisions on how to best structure the jurisdictions' verification programs:

Verification protocols will recognize existing funding and allow for reasonable levels of flexibility in the allocation or targeting of those funds. Funding shortfalls and process improvements will be identified and acted upon when feasible.

The Chesapeake Bay Regulatory and Accountability Program (CBRAP) Grants to provide the seven watershed jurisdictions with the funds needed to establish, strengthen and expand existing BMP tracking, verification, and reporting programs among other jurisdictional regulatory and accountability programs.

The BMP Verification Panel members also agree with the CAC's observation, though they do acknowledge the budgetary realities faced by the jurisdictions. As a result of these constraints, the Panel is asking the jurisdictions to focus the most rigorous verification on the most-relied upon practices in their WIPs. Specifically, the BMP Verification Review Panel recommended and the BMP Verification Committee agreed that "jurisdictions are fully empowered to target their verification programs and their most robust verification protocols towards those practices on which the jurisdictions' are depending on the most to achieve the nutrient and sediment pollutant loads reductions through their Watershed Implementation Plans."

In this way, less rigorous verification methods can be applied to BMPs that account for very minor portions of the WIPs total pollutant loading reductions. Dana York, Chair of the Review Panel, describes this as a "balance between cost and rigor." In all cases, the Panel has recommended that the states "aim high, or explain why" for their various verification programs and approaches.

a. Currently, the states receive Chesapeake Bay Regulatory and Accountability funding from EPA. These grants provide dollars for verification. It is unclear whether states have dollars unspent and available under these grants.

Yes, these grants provide funding for verification and yes, most of the states have unspent funds from prior years under these grants.

b. Additionally, implementation should, by definition, include verification. Targeting of funding to critical areas should be employed.

The May 9th revised draft framework report provides a clear call for the jurisdictions to focus on the practices that account for the greatest reductions or are their greatest priorities.

Lastly, verification for the most important and the least important practices appear to be receiving the same degree of focus and development.

Thanks to input from the CAC, the Review Panel, and the Committee, there is a much greater emphasis on verification for practices that account for the largest reductions.

The CBP needs to target the most important practices and direct the workgroups to pay particular attention to them. We understand that bringing BMP verification to the level which satisfies the "Public Confidence" principle mentioned above, as well as addressing concerns in the National Academy of Science's evaluation will require some significant upgrading of the partnership's programs. There is a long list of BMPs and it isn't feasible to do everything at once. Therefore, it is critical to focus on those BMPs which are most important for meeting the TMDL.

The May 9th revised draft framework report provides a clear call for the jurisdictions to focus on the practices that account for the greatest reductions or are their greatest priorities.

We respectfully request a formal response to this letter. In order to assist you, knowing your schedule is a full one, we would be glad to receive a verbal response via a meeting among you and your staff with available members of CAC at a time convenient for you.

This constitutes the second formal response to the original December 17, 2012 letter.

July 15 2013 Letter to Nick DiPasquale

As stated in our letter to you on December 17, 2012, CAC sees the need for robust and practicable procedures relating to both "transparency" and "verification."

"Of particular interest to us is the need for guidance delineating what is and is not sufficient transparency as required in the "public confidence" principle. Absent a significant level of heightened transparency in the verification process itself and the underlying data to support any conclusions; we will not meet the public confidence standard envisioned by the principle".

On February 4, 2013 the Program responded in a letter to CAC and requested CAC to help with defining operational transparency:

"This is an issue on which the Citizens Advisory Committee must advise the Partnership- help us collectively define what we mean by transparency and how that transparency can be achieved. The Committee should share specific examples which can be applied across source sector and jurisdiction as is the intent behind the Partnership's adopted public confidence principle."

CAC member, Rebecca Hanmer has been participating on the Verification Committee and provided feedback on behalf of Citizens Advisory Committee.

The focus of this correspondence will be on the relationship between "transparency" and "verification" - with initial emphasis on agricultural non-point sources of nutrients and sediments because of the importance of these practices for achieving Watershed Implementation Plan (WIP) requirements. We recognize there are in some instances, legal limitations for reporting some farm-specific information. Although there may be some practical limitations

associated with gathering and reporting information on BMPs implemented voluntarily, the BMP Verification Committee's principle re: "sector equity" dictates giving attention to agricultural verification protocols that provide the same level of transparency that occurs with, for example, urban and suburban stormwater. Currently, this does not exist.

The [Transparency Subgroup](#) of BMP Verification Committee members,⁴ along with Rebecca Hanmer, then a Citizens Advisory Committee member, drafted up the addendum to the public confidence principle working closely with the Partnership's [Agriculture Workgroup](#), the BMP Verification Review Panel, and the BMP Verification Committee. Though the addendum is still subject to change by the Partnership prior to final adoption by the Principals' Staff Committee, the transparency addendum currently reads as follows in the May 9th revised draft framework report:

“Transparency means operating in a way so any outside reviewer can determine what actions were taken, which data were synthesized to generate a report or conclusion, how data was collected and obtained, what measures were employed to ensure data accuracy, who is responsible for data collection and synthesis, who is responsible for ensuring data accuracy, and the methods of data analysis utilized.

1. The measure of transparency will be applied to three primary areas of verification: data collection, data validation, and data reporting.
2. Transparency of the process of data collection must incorporate clearly defined quality assurance/quality control (QA/QC) procedures, which may be implemented by the data-collecting agency or by an independent external party.
3. Transparency of the data reported should be transparent at the finest possible scale that conforms with legal and programmatic constraints, and at a scale compatible with data input for the Chesapeake Bay Program Partnership's modeling tools.
4. It is recognized that transparency of data reported will vary across verification methods and data collection and reporting programs. This variance, however, should not negate the commitment and obligation to ensure transparency at the highest level possible in collection, synthesis and reporting.”

For example, several of the jurisdictions reported significant pounds of nutrient pollution reduction based on implementation of management plans. However, in contrast to the high rates of reported nutrient management plan implementation, the 2011 CEAP Report found that only 9% of cropped acres met the criteria for both phosphorus and nitrogen management, when rate, form, time, and method of application were considered. Results indicate, for example, that only 35% of cropped acres met criteria for application rate for nitrogen and 37% for phosphorus. For "manured" acres only, these percentages drop to 30% and 19% respectively. The CEAP report concluded that despite improvements in nutrient application rates, about 66% of corn acreage does not achieve the rate, timing, and method criteria that minimize environmental losses of nutrients. As a result, improved nutrient management on cropland and verification of that improvement continues to be a major conservation policy goal.*

⁴ http://www.chesapeakebay.net/groups/group/bmp_verification_transparency_subgroup

In sum, there are significant differences between reported progress provided by the jurisdictions and that reported by farmers themselves via the CEAP process. Only a transparent verification protocol that includes the recommendations below can resolve these differences.

Recommendations:

(1) Technical assistance: CAC supports the decision to create a workgroup to "dive deeply" into making recommendations for verification protocols for nutrient management plans to ensure transparency of on-farm application of fertilizer, manure and bio-solids. We respectfully ask that you consider the suggested candidates for workgroup appointment that we have listed in the attachment.

The recommendations of the Agriculture Workgroup's nutrient management plan subgroup will be incorporated directly into the July 2014 final draft basinwide BMP verification framework report.

(2) Targeting: We recognize that the jurisdictions and Program face many challenges in strengthening verification and transparency. However, changes are essential to solving the current problems with insufficient verification. Targeting of those practices and geographic areas based on the geographic location of the greatest agricultural loadings should be a significant component of WIP reporting. In sum, targeted implementation frees up funding for verification.

Our initial response to the July 25th letter still stands.

(3) Third party analysis: Protocols should require review of any aggregate information by a third party as well as a comparison between the aggregated information and real world modeling data (to analyze water quality implications).

Under the heading "BMP Data Transparency, Privacy, and Public Access", the May 9th revised draft framework report contains the following:

Aggregated Data Considered Transparent Upon Validation. Aggregated data can be used, be considered validated, be provided to the public, and still be considered consistent with the Partnership's transparency principle if there is independent verification/validation of the underlying data. The Partnership will develop and adopt a set of data validation procedures.

This recommendation was developed by the BMP Verification Review Panel and agreed to by the BMP Verification Committee for incorporation into the basinwide framework.

The BMP Verification Review Panel has recommended the Partnership adopt and use the following terms and definitions in all its individual partners' and collective programmatic descriptions and documentation of verification, particularly in place of the terms like "third party". The Panel recommended the following definitions to both compliment and further clarify the application of the transparency addendum to the BMP public confidence principle as well as clarify the use of these terms in the workgroup's BMP verification guidance and the resultant jurisdictions' BMP verification programs.

Each of these terms has significant implications when they are used in verification guidance and protocols, each carrying with it time and resource investment implications. The use of the terms “independent” and “external independent” and parts of the wording for the definitions below were drawn directly from publications on the topic of peer review authored by the National Research Council, the U.S. Army Corps of Engineers, and the U.S. Environmental Protection Agency, and are consistent with USDA Natural Resources Conservation Service verification procedures.

Independent Review: a review carried out by someone within the same organization having technical expertise in the subject matter to a degree at least equivalent to that needed for the original work, but who was not involved as a participant, supervisor, technical reviewer, or advisor in the development or operations of the program/practice under review.

External Independent Review: a review carried out by a separate outside organization with technical expertise in the subject matter to a degree at least equivalent to that needed for the original work. Generally, this level of review is sought when considering key decisions that are being made that could affect the overall verification program.

*(4) Tracking: There is a basic need to track where manure goes. Many producers have insufficient land for environmentally responsible use of the manure.** Even when there is a permit to guide the handling of manure on a farm, too often once transport of the manure off the farm occurs, there is no accounting (chain of custody) of where the manure goes. A clear and transparent accounting of the fate of the manure will not only have water quality benefits but can also help promote market based solutions that can provide farmer income from alternative off-farm uses.*

Our initial response to the July 25th letter still stands.

(5) Model: If there are to be any early model revisions related to non-point source provisions, they should be accompanied by actions to ensure that other important issues are addressed. For example, phosphorus soil saturation should be taken into account and nutrient reduction credits should only be given when a CAFO permit is implemented, not merely applied for or issued.

Our initial response to the July 25th letter still stands.

(6) Public understanding: Transparency is an essential element of public understanding and acceptance of any verification program and protocol. The Program needs to ensure that any protocol and any assessment of the protocol can be clearly understood by the public.

The CAC needs to review the May 9th revised draft framework report and determine for itself whether or not the work by the Panel, Committee, and workgroups has addressed the Committee’s concerns, requests, and recommendations on transparency.

In conclusion, we note that several of these recommendations are included in the EPA "Interim Assessment of 2012-13 Milestones and WIP Progress" and look forward to seeing them reflected in the next WIPs issued by the jurisdictions.

Our initial response to the July 25th letter still stands.

Lastly, CAC is committed to preserving healthy and sustainable agriculture in our communities. Rural landscapes are integral to the fabric of our region's culture. Just as clean water is important to healthy communities, so are healthy local food sources. We believe responsible agricultural practices that seek credit towards the WIPs are as congruent as possible with urban stormwater verification requirements. We encourage the EPA to use the Chesapeake Bay Program as a venue to promote and share successful examples across the watershed that demonstrate healthy farm practices, the community ethos that support them, and the mechanisms that promote verification.

Again, thank you for keeping the focus on verification and transparency over the past several years. Your Partnership has been listening and responding!