Attachment A
(Updated October 31, 2012)

Feedback/Comments from the Chesapeake Bay Program Partnership's BMP Verification Review Panel and the Water Quality Goal Implementation Team on the Revised Draft BMP Verification Principles (August 16, 2012 Version Attached)

BMP Verification Review Panel Members Feedback During the October 12 Conference Call

Richard Klein observed that in addition to increasing public confidence, it may be possible to increase public support for inspection and maintenance of practices through the BMP verification process. He recommended using the BMP verification process to how to use verification to improve effectiveness of BMPs and support for implementation programs.

Dan Zimmerman pointed out that it is key that people understand the value of BMPs. There is a constant battle to help the public make that connection. People need to understand the value of these individual BMPs to helping restore and maintain water quality. The CBP Partnership needs interweave/inject education directly into the BMP verification process.

Mike Gerel stated that for principles 1 and 2, its going to be difficult to balance how to pay for verification, implementation, etc while not compromising scientific rigor of the accountability. Need to factor in the reality of how these verification efforts can

Mike Gerel followed up by point out this was another reason for placing emphasis on the need for full public transparency. The public needs to understand that costs were consideration of the development of the BMP verification protocols and that the resulted verified BMP data were used by the partnership is directly support program implementation. This will all help make case that the Partnership is are being realistic and considering costs while making decisions on verification.

Rebecca Hanmer asked for an explanation of principle 5. She could see how jurisdictional equity would be determined more easily than sector equity. She read equity as an equal amount and did not believe that was what the Partnership intended.

Tim Gieseke recommended developing a principle or adding principle language communicating the commitment to integrating the verification process into existing management protocols.

Tim Gieseke further recommended principle language stating that the 'transaction cost'—the costs associated with the inspection, assessment, monitoring, and/or survey actions yielding verification—need to be relative to the value of the BMP being verified.

Robert Traver asked whether the principles reflect very different highly visible to the public vs. hidden from view of the public nature of some BMPs and how their different set of BMPs will be verified?

Gordon Smith observed there are really a couple of different uses of the verification information what we need to know and what processes we need to employ to gain that understanding. When people understand how the verification information will be used, they will be much more willing to share information if they aren't worried about federal enforcement actions for failure to meet TMDLs. Even the federal enforcement action is going after governmental entities, producers are going to be hesitant to provide the verification information. The Partnership will have to think about these sensitivities.

Dana York asked whether the Urban Stormwater Workgroup has developed their own set of principles? Are their principles more rigorous then the draft principles the Panel is currently reviewing?

Gordon Smith stated that we are all aware of corporate responsibility efforts underway, not necessarily related to TMDLs, but may benefit the TMDL implementation process. Recommend adding principle to recognize other conservation improvement efforts in the private/NGO/utility world that may add benefits to the verification process.

BMP Verification Review Panel Members Additional Feedback Following the Panel's October 12 Conference Call

Richard Klein's feedback received by email on October 28, 2012:

Attached are my comments on the principles.

I suggested the following for Principle 3: Public Confidence

> "Given the shear number of BMPs requiring on-going verification, some form of public participation seems vital. Therefore, a subset of verification protocols should be developed that are suited to the technical and time constraints of lay volunteers. These protocols must be designed so volunteers can generate useful data by viewing practices from public areas (without trespassing onto private property). Through participation in the verification process, public confidence in the data will be enhanced. This form of participation will also expand public understanding of BMP benefits and therefore public support for programs essential to getting the most effective practices on the ground and maintaining them in good working order."

Following are examples of guidance which may allow volunteers to generate meaningful data on BMP condition…

- Auditing Stormwater Best Management Practices in Maryland;
- Stormwater Ponds: How to Maximize Benefits for You & Your Neighbors;
- Infiltration Trenches;
- Rain Gardens/Bioretention; and
- Winter Cover Crops.

Andrew Sharpley's feedback received by email on October 30, 2012:

I read through the minutes and guiding principles that have been established and I do not have any further comments to make at this time. It is obvious that there has been a great of effort put into getting this far with many committees and panels internally and externally to the CBP, which have crafted scientifically-sound BMPs. Obviously, as we move forward with our task and Review Panel discussions, especially during the face-to-face meeting, I will have more specific comments and suggestions.

Dan Zimmerman's feedback received by email on October 31, 2012:

Just some quick thoughts on the protocol. I have been tied up with the storm the last few days. I have attempted to sit down with several ag sources to discuss how best to approach this effort. I am surprised that the group we are attempting to regulate are not represented on the group. Our success as a small watershed group has been to relate to the people we are attempting to change to be good watershed Stewarts. Some thoughts on your proposal.

1. Verification regulations will be followed more closely if they relate to the local watershed, something people identify with.
2. Education, important component explain how the maintenance of the BMP is good for their pocket book as well as the environment. Many times this is the case and is a powerful motivator.
3. Try to tie the private sector into supporting the maintenance of the BMPS. Example, the private sector wanted to sell no-till plows, great support for this new approach, it was good for the farmer, good for the equipment salesman and good for the environment.
4. Verification efforts should be as simple as possible and tie into reports already being prepared. This is why we need to talk to farmers and get input.
5. Several monitoring programs are out there now. Preserved farms are visited and monitored on a regular basis. Why not use existing programs to get some of the verification data. Would save money, educate a broader base on the importance of BMP's.

Just some quick thoughts. Thanks

Tim Gieseke's feedback received via email on October 30, 3012—recommended additional text is in bold typeface and recommended deleted text is indicated by strikethrough.

Verification protocols will ensure that under normal operating conditions:

- Structural practices are properly designed, installed, and functionally maintained to ensure that they are achieving the expected nitrogen, phosphorus, and sediment pollutant load reductions reviewed and approved to by the CBP Partnership;
- Practices, including annual practices, meet the CBP Partnership's implementation and management definitions;
- Practices are consistent with or functionally equivalent to established practice definitions and/or standards;
- Practices are not double counted; and
- Practices are currently functional at the time of seeking credit and not removed from the landscape~~.~~**; and**

- **Improvements created by practices are not offset by other landscape management activities within the farmscape and/or watershed.**

PRINCIPLE 5: SECTOR EQUITY

Each jurisdiction's program should strive to achieve **uniformity, standardization and** equity in the measurement of functionality and effectiveness of the implemented BMPs among and across the source sectors.

PRINCIPLE 6: TRANSACTIONAL COSTS

Verification of practices can be a costly endeavor and includes ex-ante costs associated with obtaining information need to plan, model, assess, generate agreements and communications, and ex-post costs associated with monitoring, governance, assurance and evaluation. Since BMPs vary in implementation cost and effectiveness, verification processes with relatively high transaction costs may limit the application of ecologically valuable BMPs. Transactional costs usually become more apparent in a market-based system compared to a government or non-profit process, but in all cases, relatively high transaction costs become a burden to all verification processes and practice implementation.

- **Managing for lower transaction costs (while maintaining confidence) could provide a greater portion of total funds to be used in implementation of BMPs.**
- **If market-type processes are a future potential strategy, and if markets cannot be sustained when transaction costs are greater than the value of the trade, then the transactional costs of verification have to be relatively lower than the value of the trade.**
- **Full accounting or inventory of transactional costs could assist in identifying means to lower transactional costs**

PRINCIPLE 7: INTEGRATIVE MANAGEMENT

The management of natural resources and the values it generates is integral to all sectors of society and commerce. Farmland soil is viewed as an integral natural resource to the quality of water and as an integral production resource to the production of food and feedstocks. These natural resources and their outputs extend to the ecology of Chesapeake Bay, to the regulatory requirements of government bodies and to the production demands of the industrial food system.

An integrated verification process would recognize:

- **Recommendations for on-farm management of production resources from agriculture professionals are inseparable, in many cases, from on-farm natural resource management. A verification process that integrates this human and information resource can provide logistical, participatory and financial benefits.**
- **Urban managers, similar to agriculture, are actively engaged in maintaining infrastructure and surrounding landscapes. A verification process that integrates this human and information resource can provide logistical, participatory and financial benefits.**
- **Corporate sustainability efforts have revealed that a significant portion of a corporation's ecological footprint is derived from stocks obtained from the landscape; farms and forests. Substantiating sustainability claims will require the verification of certain land management activities. A verification process that**

allows corporate resources to be integrated with governmental goals can provide logistical, participatory and financial benefits.

PRINCIPLE 8: LANDSCAPE CONTEXT
Verification of BMP implementation and its improvement in water quality should be relative to landscape management within the context of the farm unit and/or watershed. Implementing a BMP that reduces soil loss by ten tons on a particular parcel of land should provide relative confidence that sedimentation is reduced into the Chesapeake Bay or watershed by ten tons. Associating the BMP improvements within the context of landscape management should improve public confidence, advance adaptive management strategies and create integration of resource management.

Water Quality Goal Implementation Team Members' Comments

Comment from Pennsylvania Department of Environmental Protection:

Recommended additional text for principle 5 in bold, red typeface.

PRINCIPLE 5: SECTOR EQUITY
Each jurisdiction's program should strive to achieve equity in the measurement of functionality and effectiveness of the implemented BMPs among and across the source sectors**, as appropriate**.

Draft Chesapeake Bay Program Partnership's BMP Verification Principles

Revised: August 16, 2012
Subject to Further Revision

The Chesapeake Bay Program (CBP) Partnership has committed to the development and adoption of a basinwide best management practice (BMP) verification framework for use by the seven watershed jurisdictions to assure data quality for BMP reporting for annual Model Progress runs. The CBP Partnership will establish a BMP Verification Review Panel which will examine the degree to which a jurisdiction's program meets the parameters established by the Partnership's BMP verification framework. This review will include an examination of existing BMP measurements, accounting, and inspection systems and any proposed improvements to those systems submitted for CBP Partnership review. The Partnership recognizes that some jurisdictional programs may already achieve some of these principles and may not require significant modification or enhancements.

The CBP Partnership has defined verification as the process through which agency partners ensure practices, treatments, and technologies resulting in reductions of nitrogen, phosphorus, and/or sediment pollutant loads are implemented and operating correctly. The process for verifying tradable nutrient credits or offsets is a separate, distinct process not addressed either by these principles or through the partnership's BMP verification framework.

Working to verify that practices are properly designed, installed, and maintained over time is a critical and integral component of transparent, cost efficient, and pollutant reduction effective program implementation. Verification helps ensure the public of achievement of the expected nitrogen, phosphorus, and sediment pollutant load reductions over time. The CBP Partnership will build from existing practice tracking and reporting systems and work towards achieving or maintaining the following principles.

PRINCIPLE 1: PRACTICE REPORTING
Verification is required for practices, treatments, and technologies reported for nitrogen, phosphorus, and/or sediment pollutant load reduction credit through the Chesapeake Bay Program (CBP) partnership.

Verification protocols may reflect differing tools and timelines for measurement, as appropriate, for a specific BMP. For example:

- A permit (e.g., MS4) may establish periodic inspections for a regulatory BMP;
- A contract may govern examinations of a cost-shared structural (e.g., manure storage structure) or annual (e.g., cover crops) BMPs; or
- A statistical sampling may best define measurement for non-cost shared structural, annual and/or management BMPs.

Verification protocols will ensure that under normal operating conditions:

- Structural practices are properly designed, installed, and functionally maintained to ensure that they are achieving the expected nitrogen, phosphorus, and sediment pollutant load reductions reviewed and approved to by the CBP Partnership;
- Practices, including annual practices, meet the CBP Partnership's implementation and management definitions;
- Practices are consistent with or functionally equivalent to established practice definitions and/or standards;
- Practices are not double counted; and
- Practices are currently functional at the time of seeking credit and not removed from the landscape.

For verified practices not consistent with, nor fully or partially functionally equivalent to, established practice definitions and/or standards, partners and stakeholders can seek CBP Partnership approval for crediting through the established CBP Partnership's BMP review protocol.

Any practice, treatment, and technology (or partial or full equivalency) approved by the CBP Partnership that is properly tracked, verified, and reported will be incorporated into the CBP Partnership's models and credited in the accounting of progress toward the jurisdictions' milestones and in the interpretation of observed trends in monitoring data.

PRINCIPLE 2: SCIENTIFIC RIGOR

Verification of practices assure effective implementation through scientifically rigorous and defensible, professionally established and accepted sampling, inspection, and certification protocols regardless of funding source (cost share versus non-cost share), source sector (agriculture, urban, etc.), and jurisdiction (state, local). A method and schedule for confirmations to account for implementation progress over time will help ensure scientific rigor. Verification shall allow for varying methods of data collection that balance scientific rigor with cost-effectiveness and the significance of or priority placed upon the practice in achieving pollution reduction.

PRINCIPLE 3: PUBLIC CONFIDENCE

Verification protocols incorporate transparency in both the processes of verification and tracking and reporting of the underlying data. Levels of transparency will vary depending upon source sector, acknowledging existing legal limitations and the need to respect individual confidentiality to ensure access to non-cost shared practice data.

PRINCIPLE 4: ADAPTIVE MANAGEMENT

Advancements in Practice Reporting and Scientific Rigor, as described above, are integral to assuring desired long-term outcomes while reducing the uncertainty found in natural systems and human behaviors. 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.

PRINCIPLE 5: SECTOR EQUITY

Each jurisdiction's program should strive to achieve equity in the measurement of functionality and effectiveness of the implemented BMPs among and across the source sectors.