CBP WQGIT BMP Verification Committee
Tuesday, June 19, 2012 Meeting
Chesapeake Bay Program Office Main Conference Room
410 Severn Avenue
Annapolis, Maryland

SUMMARY OF DECISIONS AND ACTIONS

Objectives of Today's Conference Call – Rich Batiuk
• Brief review of the agenda, the advance briefing materials, and desired outcomes from the meeting.
Advance Briefing Material: Chesapeake Bay Program Partnership's Draft BMP Verification Principles

What is Verification and Will I Know it When I See It – Mark Dubin/Tom Schueler
• A brief primer on some real live examples of BMP verification and the challenges we are facing so we all work from the same level of understanding.
Presentation: What is Verification….and Will I Know It When I See It--Agricultural Verification M. Dubin Verification Intro

- Mark – Agricultural Verification
    - Agricultural Verification isn't a new concept: it's the how and why you're looking at verification.
    - What's constant over time? Key Element: the input of people and communication amongst the sectors (local, state, and fed governments).
    - Structural Management Activities:
        - Long term aspects of agriculture – structure/design aspects of agriculture changes on a long term basis over course of years
        - Feed management – something that changes on a daily basis
        - Data Management Practices – can have a benefit to the CBP partnership because this can lead to access to better records regarding management activities
        - Non-Cost Shared Management Practices – conservation actions producers are doing independently (hard to capture this information)
            - Each of these need to be maintained properly over time
            - Do these practices meet a certain standard? Verify if practices meet USDA or other conservation design standards
                - Verify if a functionally equivalent practice still provides some benefit that can credited by the partnership.
    - Verification occurs every day across the landscape – we want to know where we are, where we've been, and where we're going – identify the how and why

Presentation: Verification of Urban BMPs T. Schueler Verification Introduction

- Tom – Verification of Urban BMPs
    - Historically, urban BMPs were not perpetual
    - Performance of these BMPs is linked to maintenance – requires ongoing maintenance to assure performance.
    - Legacy of old BMPs

        - Send everything to one central BMP (e.g., wet pond)
    - We are now operating under the new LID (low impact development) model
        - Creates dozens of individual practices on the urban landscape, but they're harder to count and verify as compared to the older BMP implementation approach
    - Visual inspections are necessary to confirm BMP performance.
    - Given that there are thousands of local BMPs to track, it's a big task to local and state governments to tackle
    - How to deal with our legacy BMPs?
        - Most localities don't know whether BMPs are still working, need maintenance, or no longer viable.
        - A few of our new BMPs don't perform well either, for example, if bioretention area is above the water capture level (built too high)
        - Some urban BMPs have unique verification issues (e.g., nutrient management on lawns)
        - We have an existing system in place to report, track, and verify BMPs through the existing state stormwater regulatory programs but it needs to be revised to assure actual BMP performance
        - Ability to verify if often linked to whether a community has a MS4 permit or not.
        - Stormwater (urban) BMPs making slow but steady progress (resource constraints, etc.)
    - Progress made by the Urban Stormwater Workgroup to date
        - First draft of BMP verification principles and protocols in December 2011
        - Second draft in March 2012
        - Third and fourth draft in April 2012
        - Urban BMP Verification Committee established in May 2012

Review of Source Sector and Habitat Workgroups' Draft Verification Protocols – Workgroup Chairs/ Coordinators

Stormwater: Norm Goulet/Tom Schueler
Presentation: Proposed Principles and Protocols for Urban BMP Verification Proposed Urban BMP Verification Principles and Protocols

- Norm - Urban BMP Verification (Maintenance)
    - Must center around 4 different types of BMPs: traditional engineered stormwater BMPs, new runoff reduction BMPs, non-structural or operational BMPs, and stormwater retrofits and restoration practices
        - All have their own unique set of challenges from a verification perspective.
        - Key factor in all of the four is maintenance (the most expensive in the entire stormwater arena).
        - Regular inspection and maintenance is key in any kind of verification principle/protocol.
    - The Urban Stormwater Workgroup is on their fourth draft of their Verification Principles/Protocols and they haven't yet reached consensus. The only firm

agreement is that any kind of verification principle/protocol must utilize the existing Phase I and Phase II MS4 framework.

- Adaptive Management isn't new in the urban BMP verification – from a design standpoint (do they work as meant to work?), these practices are constantly going through changes based on experience with application in the field.
- Verification will be tied to visual inspections.
  - Removal efficiencies will be renewed or extended based on visual affirmation that BMP still exists, still works as meant to, and still maintains pollutant removal efficiencies as intended.
  - Largest problem here: how will you force an inspection maintenance program onto a sector where there are no regulatory permits (millions of acres that are non MS4 areas)?
    - Big Question: How to address a non-MS4 community - Non MS4 community know that there is no mechanism to force this on them.
      - Each state is starting to address this issue.
      - For example, Virginia, as part of its construction permit, will have some initial verification of stormwater practices.
      - But to continue to get removal credits, there will need to be a mechanism in place for verification of the non-regulatory practices before the CBP partnership can effectively track and credit these practices.
      - Uniquely in Maryland, there are watershed implementation plans or WIPs for each county.
  - Local BMP Record keeping: needs to be more consistency in terms of how this is being done
  - Recommended inspection cycle should be tied to the MS4 BMP verification system (in the MS4 jurisdictions).
    - Discussing a form of rapid
  - Most controversial – BMP downgrades
    - If inspecting a facility that is not working properly, give facility a timeframe to get back up to proper performance. If the facility cannot get there and is still nonfunctional, the facility will be downgraded and cannot get BMP credit for it.
  - Special procedures are needed for urban MBPs installed for mitigation purposes (would be different from trading).
  - Proposed Charge of Urban Stormwater Workgroup's Verification Committee:
    - Their charge includes discussion of Verification and Reporting, but they're also putting together a Verification Committee to look at what currently exists.

- Visual indicators for determining whether a practice is still performing to established standards or removal efficiencies are still needed. Local partners are asking what the visual indicators are. Further technical work necessary to develop what the visual indicators are to make a determination whether the nonstructural practices are working as designed.

Urban Stormwater Protocols: Committee Members Discussion

- How to address non MS4 areas?
    - What level of expertise is required to carry out the inspection?
    - Depends on the practice/treatment itself—from physical presence to below ground infiltration.
    - If proposal from the Stormwater Workgroup is to fit verification into the existing MS4 framework, where is the divergence of opinions within the workgroup?
    - Principally, it's how to address the non-MS4. How are we going to force a maintenance and inspection program onto municipalities which are non-MS4? No mechanism to make this happen.
    - We don't have unlimited resources, so we'll need to let go of some areas as we simply can't report/verify every BMP on the landscape.
    - Consider some approach of surveying or sub-sampling to realistically get at the multitude of practices being implemented in non-MS4s areas.
    - Need to be realistic of about our ability to verify stormwater BMPs in the non-MS4s.
    - Don't see how we can mandate reporting of BMP in non-MS4s.
    - Must look at these based on the:
        - Evaluation of the major populations in terms of what's covered by MS4 areas.
        - Focus on the major population centers.
    - The partnership's Bay watershed model has regulated/non-regulated pervious and impervious surfaces.
        - In terms of the impervious surface, it's a 50-50 split in terms of what's regulated and not. Therefore, there is a lot of developed land area not covered by MS4s.
        - There it's not the human population that is determinative, but rather it's the perviousness of the land use.
    - There is workgroup agreement to use the MS4 system, but there is recognition that the level of institutional structure necessary to even carry out the desired level of reporting and verification is still lacking.
    - Each state is starting to address the lack of reporting outside of MS4s through their existing/new stormwater regulations, but we are still in the very early stages of this expanded reporting system.
    - There were no specific ideas for how to best address the non MS4 areas from the Urban Stormwater Workgroup.
    - The practices that are not regulated are not inspected once built, so there's an assumption that they're not really working as intended because they're not being inspected to ensure proper functioning.
    - Urban Stormwater Workgroup has charged each BMP panel to address BMP verification for the subject BMPs. The Workgroup has also convened a Verification Committee to work further on their protocols and address those BMPs not currently be addressed by the existing/planned BMPs.
    - NEIEN exchange network is very flexible and can handle just about any type of data.

ACTION: The Urban Stormwater Workgroup would like to work directly with Marty Hurd and his Tetra Tech NEIEN team on ensuring the jurisdictions' NEIEN nodes and systems are positioned to fully report the full suite of stormwater practices and treatments.

    - BMP panels have discussed levels of treatment vs. individual practices for small areas to determine levels of treatment and report that rather than BMPs (a way to get around BMPs). Estimate level of treatment based on the area.
        - States are moving in this direction through adoption of state performance standards.
        - This will capture growth going forward, because all construction must meet those standards in the states that have standards in place.
    - The bigger issue is, "what do we do to those structures that currency exist and were built historically?"
    - Moving in this direction to get away from tracking individual BMPs – but this doesn't deal with the vast majority of systems already in place put into existence over the last 30 years.
    - In response to the question "do the performance standards apply to only the MS4 or non-Ms4", the answer was these standards apply to all new construction.
- Addressing downgrading of BMPs
    - This is a common theme across all the source sectors.

ACTION: The BMP Verification Committee will further examine the issue of 'downgrading' BMPs to ensure we are addressing this issue consistently across all pollutant source sectors.

Agriculture: Frank Coale/Mark Dubin
Presentation: BMP Verification Matrix AGWG Draft BMP Verification Protocols

- Frank – BMP Verification Process
    - Depending upon the BMP, they differ based on time, whether they're cost shared, whether they are applied on annual, monthly, daily, even hourly basis.
    - A lot meet standards, but some clearly don't.
    - What are other findings in terms of the number of non-cost shared practices? (Russ Baxter)
    - A lot of variability—some counties and regions have a lot of non-cost shared practice, others have only minimal.
    - They're very different so difficult to count because they're not consistent across producers.
    - The level of cost share depends on the community, whether there are voluntary programs, etc. Different communities all have a different approach to the adoption.
    - The Agricultural Workgroup spent a lot of effort evaluating different surveying procedures for BMP implementation.
    - Unanimous (or Strong Consensus) Points Emerging from the Agricultural Workgroup membership:
        - Utilize existing programs and data instead of creating a brand new process
            - Federal and State verification practices are already in place for most cost-shared BMPs.

        - Professional evaluation done once is good enough no matter who/which group did the verification – don't duplicate efforts.
        - We don't need a separate CBP partnership certified verification entity.
    - All verified conservation practice data must be accounted for by and credited through the appropriate CBP model.
    - Relative accuracy or confidence in verification process will vary by BMP.
    - Relative credit will necessarily vary by verification process and accounting confidence.
- Agricultural Workgroup BMP Verification Concept (see presentation slide)
    - The Workgroup has kept original framework, agreed on the overall structure on how to move forward, but refinements still in process.
        - Allows for different approaches for verification reflecting the diversity of conservation practices and jurisdictions.
        - Considers relative cost of verification process so that state and local partners can make informed decisions on the trade-offs between the selected verification approach and the level of credit provided.
        - Each one of the 14 methods will be recognized in the partnership's BMP tracking and reporting and model simulation processes.
        - Irrespective of the funding source, there must be consistent rigor applied on all collected and verified BMP data.
        - Big hurdle still to be overcome: quantification of the relative confidence we have in the different verification methods – must be based on available scientific and statistical data.
- The Agricultural Workgroup came up with the Draft Ag Verification Protocol Concept spreadsheet dated June 15, 2012.
    - Five possibilities that WG proposes across five spreadsheets
    - Based on:
        - A records review
        - Farmer's self assessment
        - Government entity
        - Certain sample (example transect surveys, each study is constructed with an inherent confidence level based on mathematical model),
        - Remote imagery/sensory.
    - Entity can select from 14 different verification choices based on price, confidence levels, and credits.

Agricultural Verification: Committee Discussion

- Difficult to come up with what credit should be assigned depending on what option is chosen.
- Gives flexibility to the states to developing verification plans, and to the ag community – didn't cut off the acres, but just the credit value – so every acre goes in.
- Has there been analysis into the least level of confidence dependent on the sector?

- Jurisdictions will need to evaluate whether their selections of specific verification approaches with varying levels of credit could impact their ability to reach their WIP goals.
- The Agricultural Workgroup has the goal for developing defensible relative confidence and credit values based on scientific and statistical.

ACTION: The Agricultural Workgroup will consult with the BMP Verification Review Panel on how to best go about developing defensible relative confidence and credit values based on scientific and statistical.

- Does the matrix only address non-cost shared practices or all practices? Will all this data be accepted by NEIEN?
- The matrix addresses all practices—cost shared and non-cost shared, with the cost shared practices verified by professionals with full credit given. And yes, NEIEN can accept all these types of data.
- The Agricultural workgroup did not focus on NEIEN, it focused on a system that made sense to the agricultural sector. Others will need to figure out how to incorporate the new data being collected under the proposed system into NEIEN.
- Last column could end up being a train wreck about just how far to downgrade the BMP efficiency.
- The universe under consideration, it might be from 100% to 50% given if its only 50% effective may not be worth even reporting.
- The relative costs of these different approaches being placed into ranges based on experiences of the partners—low, medium and high—is the approach under consideration by the Agricultural Workgroup.
- The key outcome from discussing this approach with the partners, they want to be in a position of determining "if we use this option, we want to know up front what this approach going to net us in terms of credit in the end."
- We will not cut off acres; however, we will reduce the amount of credit given based on the verification approach.
- Very impressive, very proactive approach. Did the issue of degrading BMPs come up like it did with the Stormwater Workgroup?
- How will you get the producer that is just implementing non-cost shared practices without any federal cost share?
- Cold calling and otherwise reaching out to the producers.

ACTION: Chesapeake Bay Program Office staff will provide support to any jurisdiction wanting to analyze by taking a least cost approach to verification, would that jurisdiction still be able to meet their WIP goals.

ISSUE: The two biggest issues facing further development of the Agricultural Workgroup's recommended agricultural verification protocol are: 1) the degree of confidence in establishing the BMP credit value for each different verification approach, and 2) developing costs associated with the different verification protocols with some level of relative confidence.

Forestry: Sally Claggett

Presentation:
Advance Briefing Material: Forestry WG BMP Verification Principles and Protocols

- First Protocol – Urban Forestry Program
    - Much simpler given only there are only five Forestry BMPs.
    - New definition of expanded tree cover – more representative of what they're tracking. We don't care just about what's being planted, but we care about what's the resultant tree cover, and what you get credit for is what you've expanded in terms of tree cover. New acres intended to lead toward contributing to the tree canopy.
    - Primary Strategies:
        - Conserving existing canopy, planting trees, and allowing for natural regeneration.
        - To verify this practice, must report new acres on an annual basis, and must periodically verify that overall tree cover is maintained or is increasing.
            - Expanded Tree Cover BMP Principle:
                - We need to *show* that these practices represent a net gain.
                - Must show there will be some maintenance/monitoring of the practice, and reporting if trees are being lost.
    - Focus: more about monitoring and less about maintenance.
    - Urban Forestry Programmatic Support – the states recognize urban forestry will focus partners on the ground to ensure a quality, sustainable practice to get full credit for the practice.
        - Where the group felt there was less confidence, the jurisdictions without a trusted urban forestry partner/ staff would be discounted 40% for uncertainty of survival/net gain in tree cover. An additional 70% discount is applied if a proxy for trees was a "trees sold" measure or simply a website submission is used and trees were neither monitored nor otherwise validated by a professional.
            - See PDF pg 2 Suggested credit based on likelihood to attain a net gain in tree cover (Categories A-C)
- Ag. Riparian Forest Buffer and Tree Planting BMP Principle – ensure that any new acreage of riparian forest buffer represents a net gain in overall buffer for a specific county or watershed segment.

Forestry Verification: Committee Discussion

- The Forestry Workgroup should consider using different methods to develop the different levels of confidence in the level of increased tree cover/canopy.

ISSUE: Need to more clearly differentiate the differences between Protocol 1 Urban Forestry programmatic support and Protocol 3 Monitoring under urban forestry cover.

ISSUE: Clearly there is overlap between both urban sector and agricultural sector in terms of address BMPs they have in common—riparian forest buffers, increasing tree cover. We cannot have two different verification protocols from two different workgroups (Forestry, Urban Stormwater) for the same practice (urban forestry).

ACTION: The chairs and coordinators of the Forestry, Urban Stormwater, and Agricultural workgroups will work together to develop a single set of integrated protocols for the common set of practices which apply in their respective source sectors.

- In response to the question "is the Workgroup dealing with partial credit yet?", the answer given was no, not yet, but the Workgroup, but the approach is getting up to standards and not assuming so at the beginning given there is an expectation for loss of individual trees.
- The Forestry Workgroup's objective is to challenge the non-cost shared practices to rise to the level of the cost-shared practices.

ISSUE: Some members (PA, NY) were uncomfortable with the language in the briefing calling for additional layers of bureaucracy that are unnecessary—the requirement for local laws or jurisdictional ordinances.

ACTION: The Forestry Workgroup will consider alternative language along the lines that "local guidance exists to encourage conservation of existing buffers."

ACTION: The CBP Partnership needs to work with NRCS and FSA to address the different approaches to reporting and tracking riparian forest buffers among the jurisdictions and by NRCS and FSA—need to resolve these issues, but separate from the BMP verification process.

ACTION: The Forestry Workgroup will work with the NEIEN Team to standardize the units for reported practices as well as the equations/formulas used by the states to report acres of riparian forest buffers.

- The response to the question "are you concerned about native vs. invasive in that account system" was we count invasive species as they exist, but if there's a new planting in a new regeneration area, we're not counting invasive if they're suppressing the grow of natives.
- Forest Harvesting BMP Protocol –need annual tracking because right now different states don't know how many acres are being harvested or how many BMPs are in place.

Wastewater/Onsite Treatment Systems: Ning Zhou
Presentation: Draft Verification Protocols for WWTP, CSO and Onsite Systems
Advance Briefing Materials: Wastewater BMP Verification Summary Draft, State Responses on Wastewater BMP Verification Questions

- Non-significant Wastewater Facilities: if they want any credit for nutrient load reductions in their discharges, they must have monitoring data.
    - Draft Approach: monitoring requirements will be added into the permit to verify the treatment upgrades result in actual load reductions. The monitoring data will be reported through regular discharge monitoring requirements (DMRs).
- CSOs
    - Don't have actual monitoring data, but rather use a simulated number based on acreage of service areas, reported flow, and default pollutant concentrations (varies by site).

- The CSO verification goal is to confirm there has been a reduction in flow. Reductions in CSO flows which can be accomplished in one of two ways:
    - Completely eliminate the CSO – separate the system so that no more sewer and stormwater pipes connected. Must be monitored for a year to show there's no comingling of two systems.
    - Through storage and then treatment – build underground storage for gradual treatment.
- Draft BMP Verification Protocols for CSOs:
    - Construction verification: confirm it's properly designed, installed and maintained by certified service providers.
    - Post construction monitoring or confirmation with sampling and inspection.
    - Applying existing compliance and enforcement procedures.
    - Tracking and reporting the resultant data.
- Different jurisdictions have different approaches to monitoring CSOs, but all of them have a regulatory compliance vehicle in place to confirm CSO reduction/elimination.
- Post monitoring will be used to confirm elimination or capture of a permitted percentage.

- On-Site Treatment Systems
    - The Draft Protocols developed by the Workgroup were based on the states' experiences with implementation of on-site treatment systems, selecting the best ideas and components from each state.
    - State or local authorities should verify, track and report the proper installation, operation and maintenance.
    - The design and installation must be done and reported by certified service provider.
    - Maintenance and inspection should be conducted and reported annually by certified providers and tracked by state or local authorities.
    - Tracking and reporting through the databases managed by state agencies.

<u>Wastewater Verification: Committee Discussion</u>

ISSUE: There needs to be equity across all the source sectors. Given the draft verification protocols presented during the meeting, some sectors are being held to much higher standards than other sectors. There must be equity not only across jurisdictions but also across source sectors.

Wastewater/CSO/on-sites verification issues identified by Committee members:

- Need clarification on establishment of the non-significant facility specific baseline as well as the timeframe for getting reduction credits from the Workgroup.
- The Workgroup needs to specifically address verification of actions taken to address SSOs and illicit discharges.
- The Workgroup needs to provide more details on their proposed on-site treatment systems verification approach which builds off of taking the best of all jurisdictions.

Streams: Mark Seacrist/Debbie Hopkins
Presentation: Draft Stream Restoration BMP Verification Protocols
Advance Briefing Material: Pyramid Diagram Functions Parameters

- Just recently, the Stream Workgroup agreed to use Stream Functions Pyramid as the central basis for its draft proposed stream restoration verification protocol.
    - The pyramid quantifies what is needed in the restoration project design.
    - Breaks down into 5 categories stacked like a pyramid to see levels easily.
    - Before establishing a BMP, must get committee member buy-in.
    - This is meant to be a framework – doesn't include every way to measure every parameter; this only suggests a few within the monitoring protocol.
    - The Stream Workgroup still needs to do the following to fully develop a protocol:
        - The goals within the pyramid must be set by the functions you're targeting
        - Picking the parameters within the pyramid
        - Setting measureable standards for that parameter up front when you're doing the permitting.
        - Upon project completion, then can say that you've achieved

Stream Restoration Verification: Committee Discussion

- A member expressed the concern expressed that the protocol being recommended by the Stream Workgroup takes BMP verification to a different level. Taking the next step of monitoring creates a higher standard is being applied to this BMP than to any other BMP in the list.
- In response to the above expressed concern, it was pointed out that what the Stream Workgroup is proposing if fully consistent with what the Committee challenged them to do—come up with methods to ensure that once a restoration project has been installed and it's functioning properly. Stream restoration is completely unique because it takes place directly into a stream corridor. The pyramid approach works on several levels—enabling the sponsoring agency to verify installation and functionality (our Committee's objective) as well as determine biological benefits (sponsoring agency's interest).
- Question was raised as to whether the BMP Verification Committee was focused on TMDL implementation or restoration of habitats. There are two things going on here – reaching a stable hydraulic situation and restoring the larger functioning of the stream. Protocol to get to the full function and with a piece of the protocol would be to look at the water quality component.
- In response to the question "what are the states reporting now and how does this fit into ongoing state programs?", states are only reporting miles of stream restoration with minimal to none of elements within the proposed pyramid.
- But there's a big concern that up till now, most of stream restoration has been done in the stream restoration context, so a good swath of what's being reported is mitigating prior damage to stream banks.
- This protocol is a complicated one and will take time to sort out with respect to timing and credit allocation. This will be a long term process to the place this will be developed and usable.

- We need some option to punt on some issues given the evolving state of the science behind stream restoration. We may need to look further down the road to firm up these verification protocols.

DECISION: The BMP Verification Committee agreed to recognize that some elements of the basinwide BMP verification program might take longer to put in place (months, even years) beyond the fall/winter 2012 time frame when the Committee will be seeking Management Board and Principals' Staff Committee review and adoption of the basinwide program.

ACTION: The Stream Workgroup needs to address the issue of stream restoration implementation directed towards addressing mitigation of stream bank damage to ensure jurisdictions are not getting credit for these projects.

Wetlands: Debbie Hopkins
Advance Briefing Material: Draft Wetland BMP Verification Protocols

- The Wetlands Workgroup is looking at not only extent of wetland area but also in terms of water quality benefit and supporting larger biological habitats.
- Is this setting the bar too high?
- The goal is to get every state involved in the Workgroup to see what is currently being done in terms of monitoring and is it being monitored and verified. And doing this in light of what is practice based on resource limitations.
- Concerns and challenges identified by the Wetlands Workgroup:
    - Different partners/players in a wetland restoration project – must try to figure out who'll be responsible for future monitoring/verification.
    - Consistency from state to state, and avoiding disproportionate responsibility/burden.
    - Will there need to be additional funding and if so, where will it come from.
    - Determining if there would need to develop additional protocols.

Wetlands Verification: Committee Discussion

- Concern was expressed this is a BMP that's being reviewed by several different workgroups, so the question was raised whether the Wetlands Workgroup needs to continue work on development of this verification protocol.
- In response to the above concern, it was pointed out that the Urban Stormwater Workgroup is dealing with stream restoration and not dealing with wetland restoration.
- It's really important in crediting both stream and wetland restoration is that we're not double counting. If the mitigation site was significantly larger than what was required under the permit, then the jurisdiction would get that added benefit as credit. Crediting for the entire restoration acreage would result in double counting.
- Using forestry as an example, we try to spend a lot of time to separate out the water quality elements of what we're after. With wetlands in particular, there's a distinction between water quality restoration and habitat function improvement. We need to look carefully at this verification process, separating out the water quality focus vs. habitat improvement function.

ACTION: The Wetlands Workgroup needs to focus on resolving the following issues identified by the BMP Verification Committee:

- How significant is the acreages of wetlands to be restored in watershed based on the jurisdictions' Phase II Watershed Implementation Plans?
- Addressing the possible duplication in development of wetland restoration verification protocols across multiple workgroups (Agricultural, Urban Stormwater, and Wetlands); and
- Addressing concerns expressed about verification for water quality vs. habitat/living resources benefits.

Committee Wrap-up Summary Discussion of the Workgroups' Proposals

- Focus on equitable rigor across source and habitat restoration sectors
- Bill Angstadt provided his fellow committee members with the following summary the five main issues identified from the discussions thus far:
    - Range of Accounting Practices - no consistency across all the source and habitat restoration sectors in terms of practice accounting or performance outcomes.
    - Statistical Confidence – need more data collection to support the proposed protocols. An example is verification of non MS4 urban area BMPS – how do we collect this data, leap of faith vs. specific data.
    - Outside of Verification – must encourage what we'd really like to achieve; want to use the causes to communicate. As a steering committee, are we going to encourage people to go beyond what they're already doing, and is that part of verification?
    - Voluntary Participation - must deal with a large population that will be participating voluntarily, and some people don't think highly of the federal government so if we want to encourage their reporting, we need to recognize this in our recommended protocols.
    - Scale – What level of confidence are we using? Do we just talk about a jurisdiction confidence level or down to the Bay watershed model land-river segment level of confidence? What confidence are we talking about?
- Committee members confirmed that Bill's list of issues were appropriate and consistent with what they heard.
- Virginia has 2 different data management plan documents that require that data must meet a level of QA/QC. Is there a way to institutionalize a QA/QC standard by which to measure what we're doing?

Ensuring Full Access to Federal Cost Shared Conservation Practices/Addressing Double Counting through State Specific Protocols - Dean Hively

Presentation: Ensuring Full Access to Federal Cost Shared Conservation Practices

- Five point outline of how the partnership should proceed forward from here:
    - 1. Obtain USDA data for Federal or State NRCS and FSA officials
        - See PowerPoint presentation for flow chart.
            - There are different ways of getting the data to the NEIEN responsible, and all of them are fine; they just vary the level of accuracy (depending on whether it's federal site specific data, federal aggregated data, or site specific records.)

- 2. Address Double Counting, select reportable records
    - Strategies to avoid Double Counting
        - Existing solutions are generally adequate but vary by State
        - 1. Identify practice codes that are impossible to double count, report them.
        - 2. Identify practices that might be double counted and select one of three different approaches/main strategies – see the powerpoint presentation for details
- 3. Aggregate records to maintain 1619 privacy requirements (must have at least 5 farms using the same practice before one can report on that practice)
    - It's critical where possible to work with non aggregated records for purposes of double counting.
- 4. Crosswalk USDA practice codes to NEIEN practice categories
    - Need to work towards the goal to have all common practices have the same code translation to the NEIEN process.
    - USGS Role in Crosswalk – see PowerPoint presentation for details
- 5. Submit records to NEIEN/Scenario Builder
    - General consensus that the final data submissions are best left to the states for maintenance and credit and responsibility for NRCS and FSA practices applied to their jurisdiction.
    - Objective is for all six jurisdictions to have a comprehensive 1619 agreements among all the CB jurisdictions and NRCS and FSA.
- 2012 USGS activity timeline (collaborative efforts) – see ppt.

- Recommendations to the Committee:
    - Develop common language for 1619 agreements between USDA and Chesapeake Bay states
    - Engage NRCS in discussions about expanding their recording keeping to support the level of detail desired in tracking conservation practice implementation in the Chesapeake Bay region
    - Further discuss addressing the life spans of various conservation practices and matching records to model land use parameters

<u>Full Access to Federal Cost Shared Practices: Committee Discussion</u>

- Objective is to document and facilitate the data access and transfer process, not take on or over the state tracking and reporting responsibilities.
- Concern expressed that second recommendation above is still vague in its current form. Need to bring forward specific examples where reconciliation/expansion of NRCS record keeping is needed and bring forward specific recommendations to the right levels within NRCS. Given these issues have been with us for years to decades—the more specific we can be, the harder it will to ignore what the partnership really needs.
- Beyond making requests to NRCS, the CBP partnership will need to make changes in the Scenario Builder as well as how it defines the partnership's suite of approved BMPs in order to get to the stated goals of fully accounting for all federally cost shared conservation practices as well as addressing double counting.

- Maryland Department of Agriculture has a process in place to track the detail and combine it with the federal databases – Conservation Tracker—the rest of the partnership should learn from.
- There is potential window of opportunity to discuss data sharing right now with NRCS that may not be available 6 months from now. The time might be ripe to do something now – if we can be specific in what is needed for what intended outcome.
- We know the level of specificity of what need from NRCS right now—this is not something we need to investigate further.
- In response to the recommendation for using MD's Conservation Tracker as a guide, it was pointed out that the other jurisdictions might not have the same resources to use that as a model, so if you want that, EPA would need to provide a model to the states (i.e. fund it).
- It's not just access to all cost shared NRCS conservation practices—the CBP partnership should also work towards full access to the CEAP data. Access to this data will provide the partnership with layers of information on nutrient mgmt that we've never before had.
- Access to Federal Data/Double Counting

ACTION: Matt Monroe to send Dean Hively copies of the 1619 data agreements between WV DoA and WV Conservation Agency and NRCS.

ACTION: Susan Marquart will follow up on the potential conflicts between state/NRCS 1619 data agreements and state's existing or lack thereof public/privacy laws.

ACTION: Susan Marquart will follow to determine if "attachment C" a valid part of a data sharing agreement to enable a jurisdiction to get access to FSA data.

ACTION: The CBP's Watershed Technical Workgroup will ensure the interim BMPs as well as the CBP adopted BMPs are all included on the list for the crosswalk with NRCS practice codes.

ACTION: USGS (Dean Hively) and its contractor (Olivia Devereux) will develop the specific list of what the partnership should request from NRCS to ensure the jurisdictions have full access to all federally cost shared conservation practices.

DECISION: The BMP Verification Committee agreed to work with NRCS on the following: 1) expanding more detailed recording keeping to include information needed by the jurisdictions to address doubling of conservation practices, 2) working through what changes to NEIEN reporting by the jurisdictions to ensure a full accounting of all federally cost shared conservation practices, 3) working to make the CBP BMP definitions more consistent with NRCS practice definitions, and 4) working on developing a consistent set of 1619 data sharing agreements across all six jurisdictions.

RECOMMENDATION: The Committee should use Dean Hively's flowchart as a model to chart out the data tracking, verification and reporting processes used by the partnership as well as by each individual jurisdiction.

DECISION: The BMP Verification Committee agreed that the work on ensuring full access to federal cost share data and addressing double counting will be fully documented within a USGS Open-File report and will contain the information outlined in detail within Dean Hively's presentation.

Addressing the Need for and Approaches to Cleaning-up of Historical Databases – Jeff Sweeney

Presentation: Historic Record of Practice Implementation

- Historic BMP record – goes back to 1985
  - Need to clean up the BMP to better account for and help explain changes in observed monitoring loads over time. The purpose of the model is to account for why those changes are taking place.
  - Need to address the artificial cutoffs on the amount of reported BMPs which can credited in the partnership's Bay watershed model.
    - A state would submit a certain number of acres to certain BMP but can't be credited for all the reported BMPs because those BMPs were previously at a maximum level of 100% implementation at the reported scale.
  - Need the most accurate set of historical BMP implementation levels to support calibration of the next generation of the partnership's Bay watershed model by 2017.
- 3 Options for cleaning up historical BMP data records:
  - 1) Jurisdictions can take the lead with cleaning up their historical BMP data records by going back the original data sources, rebuilding their BMP data records, and resubmitting them through NEIEN
  - 2) Use contractual support to clean up existing submitted BMPs with direction from agencies and CBP following a set of general rules
  - 3) Combination of the first 2 options

Historical Database Cleanup: Committee Discussion

- A key consideration for historical data cleanup: each of the individual practices has a different level of quality in terms of historical quality. It's a huge issue for everyone to go back, find and re-justify their BMPs. Must look at prevalence (i.e., how much are we counting on this BMP), and secondly, consistency of reporting, so that over a period of time 3-7 years, so the jurisdiction can organize what the highest priority BMPs are since most records pre-1985 are in hard copy, not electronic.

- Responses to the question posed to Committee members "which option(s) should we pursue?
  - We can't make a judgment on those options because we're not sure which options have what benefits over the others.
  - We have no sense of how much more accuracy one option provides over another one.
  - Need to answer the question what would happen if different jurisdictions chose different options. The initial response to this question was that it wouldn't matter

because each option will get you to the same objective—cleaned up historical BMP data--but with varying degrees of accuracy dependent upon the jurisdiction.

- One approach would be to what Jeff Sweeney and the CBP's Watershed Technical Workgroup identify as the problem areas. We should characterize our options in terms of state by state.
- Concerns were raised as to whether the BMP Verification Committee's charge extended to addressing historical BMP database cleanup.
    - More attention needs to be given to the identification what the problems with the historical record are on a state specific basis.
    - This group should recommend that Jeff should take a subset of issues that require that type of attention and bring those to the PSC and then the PSC should (on those issues that require attn), they can chose which of the 3 options to utilize to clean up their database.
        - WQGIT would work out first then present it to the PSC.
    - Re Verification - Depending on what method used, it'll pick up historical record as well, so there's an opportunity for a double benefit. Agree with Ann – have a separate discussion…

ACTION: Chesapeake Bay Program Office staff should work with their jurisdiction's counterparts on identifying the key individual practice which have a known history of importance in terms of reduction (therefore the value to the jurisdiction) and concern about its historical record and level of clean up required. Taking the approach would enable a jurisdiction to be more targeted in selecting where should it invest its limited historical database clean up resources.

DECISION: The CBP BMP Verification Committee agreed that addressing the clean-up of historical BMP data records is outside the charge to this committee.

ACTION: The CBP partnership will work through CBP Watershed Technical Workgroup to get the partnership's input on which of the options make the most in terms of for resources input, what is gained?

Role of NEIEN in Ensuring Accounting for Non-cost Shared Data – Marty Hurd

- The National Environmental Information Exchange Network and provide the CBP partners with the ability to exchange data.
- What kind of verification is currently supported by NEIEN?
- NEIEN can add/incorporate just about any set of data important to the tracking, verification and reporting of practices, including pictures, scans of hard copy files. One just needs to confirm that the data coming through the exchange network meets the definitions of the practices.
- Data quality and verification:
    - Pond/Wetland system option example – stacking of practices (like micropool and a wetland) can lead to data errors
    - Photos can be submitted through NEIEN specific to each practice, as can scans of permits, or GIS – all can give added weight to the practices through this metadata for verification confidence.

- Process Improvement and Modernizing Tracking Systems to look at details and capture design elements. Must update systems to capture and submit details.
- Moving forward, do the things that jurisdictions can already do to improve the detail of data tracked and reported to assist in the verification process can be exchanged via NEIEN:
    - Ex: coordinates or watersheds (HUCs), Permit IDs, Soil Types, Design Life spans, BMP Component, Animal Types, Cover Crop Types, Land Use.

Institutionalizing the Application of Life Spans into our Tracking, Verification, and Reporting Systems – Mark Dubin/Tom Schueler/Jeff Sweeney

The meeting was adjourned, ending before the above agenda item could be covered. The agenda item was rescheduled to be addressed during the August BMP Verification Committee conference call.

Adjourn 3:20 PM

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