

AGWG Meeting Minutes

June 14th, 2012

<http://www.chesapeakebay.net/calendar/event/18322/>

Action Items & Decisions

ACTION: AGWG members to submit nominations for BMP Verification Expert Panel to M. Dubin and F. Coale.

Minutes Review – Coale

- Motion to approve [05.10.12 minutes](#) – Samadani.
- Second by Sexton.
- All approve.

MDA Update on Poultry Litter Generation Calculations – Horsey

See [Poultry Manure Calculations](#).

- Initiate conversation regarding amount of manure used in the Model on the Eastern Shore.
 - MDA has been working with Olivia Devereux to resolve data anomalies within the model.
 - CBP approach, using 5 yr Ag Census data, significantly higher than MDA approach, which uses Maryland NASS total boiler production
- Would like WG to explore MDA approach in further detail.
- Coale: AgWG has also established a subgroup to look at poultry litter issues, headed by Jim Glancey of University of DE. Wants to ensure work of MDA is connected with the regional efforts of the subgroup.
- N.B. – John Rhoderick submitted the following comments after the meeting
 - Workgroup members, please note that the number of tons suggested in the alternative approach is not our estimate of Maryland's litter generation but it simply points out, in one example, the wide variation from the number currently used in the model.
 - We (MDA) will work through the Poultry Litter Panel to determine the most accurate number and methodology for model use.

BMP Verification Process – Coale

- From last month's discussion, it is clear that various states will approach BMP verification with different levels of activity, investment, and rigor. Goal today: refine feedback from May discussion.
- Need to devise a scheme of verification levels that reflect the states' desired verification involvement/effort
 - The higher verification level = increased effort/investment; increased confidence
 - Importance of flexible protocols to allow for jurisdictions to decide on feasible participation level.
- M. Dubin and F. Coale will report on 06.19 to CBP Verification Steering Committee on the status of the draft AGWG's verification principles and protocols.
 - Workgroup protocols will be presented to Principal Staff Committee at a future date.
 - Other sector WGs also developing recommended Verification Principles and Protocols.

- All proposed state verification methods will be reviewed by an independent panel using WGs' Verification Concepts.

Discussion on General Purpose of Verification Concept:

- Taglang: Recognize the need for tracking uncounted BMPs, but only certain activities are possible due to resource constraints.
 - Creates a trade-off between evaluating existing BMPs vs. tracking/implementing new practices.
 - Global tracking methods (e.g. surveys) vs. site x site tracking methods.
 - For PA, whole farm assessments for modeling purposes don't make sense for most BMPs.
 - However, preliminary list of BMPs to be tracked site x site has been developed.
- Baird: Dilemma of specificity levels that are compatible with state tracking procedures, reasonable assurance, and Bay Partnership structure. What should "bandwidth" be?
 - "Bandwidth" guidance from CBP management to determine what range/level of verification is acceptable
 - Coale: WG is charged with determining the bandwidth through various levels of participation.
 - Need to determine the number of options and how the options may be applicable to different BMPs.
 - Shenk: Verification Principles being developed by the CBP BMP Verification Steering Committee will also provide guidance regarding bandwidth and other criteria.
- Sexton: VA has an approved 5 yr QAPP and feels that the verification process would act as a parallel program.
 - Duplication of efforts with limited resources not sensible.
 - VA recommends verification protocols to be part of the QAPP
 - Raub: What does QAPP entail? Similar breadth as Verification Protocol?
 - Sexton: QAPP structure varies by the state's program. VA's program is rigorous.
 - Taglang: PA has both point source and non-point source data QAPP. Non-point source QAPP for cost-share BMP data that goes into the CBP model.
 - Shenk: QAPP is similar for other states, focused on tracking cost-share practices.
 - However, the Verification Principles and Protocols being developed entail a new approach to be reviewed and accepted by the partnership.
 - QAPP can be used to reflect portions of the verification process, but modifications would need to be made.
- York: Principle 2 in the revised document deals with scientific rigor and defensibly regardless of funding source.
 - How will non-cost share (non-CS) be approached? But also need to focus on issues with cost share (CS) practices, including states' QAPPs, to ensure consistency.
 - Dubin: States were asked to consider both CS and non-CS practices, but states still have questions.
 - Cost share programs likely already have acceptable level of verification rigor based on QAPP.
 - Non-CS is new area that QAPPs probably don't address well and where less data is collected.

- Older practices that may have been CS at one point, but are no longer reviewed under permits (e.g. 25 yr old structural practice that is not inspected under CAFO or NMP)
 - Opinion: Enough changes have occurred in the past 20 yrs to necessitate a review and clean-up of old data while tracking new implementation.
 - This increases the amount of work, but will free space for new practice implementation in the CBP Model; therefore, increased accuracy is valuable and demonstrates continued opportunities in agriculture.
- Baird: Critical value proposition in that it may prove additional BMP implementation, affecting investments by states.
- Shenk: Remains a state decision to track non-CS practices or not. States will determine the value of verification for their jurisdiction.
 - Verification will be very helpful for states developing trading programs or with large agricultural load, but value of effort will vary by state.
 - EPA will support the states determination of the best verification approach.
- Taglang: Need to count these untracked BMPs for purposed of model calculations.
 - Cost-effective to a point to verify some of these practices, not all.
 - Trade-off between accuracy and costs, but verification beneficial for: agriculture industry and not doing more than necessary for meeting TMDL allocations.
- Samadani: Focus on tracking or verification processes?
 - Coale: Both activities part of a single continuum, so both must be considered.

Agricultural BMP Verification Comments – Jurisdictional Agencies

- VA (Sexton): Focused on using the approved QAPP as foundation for verification process.
 - However, evaluating and addressing potential vulnerabilities (e.g. cover crop and CNT tracking)
 - This summer, releasing geo-referenced nutrient management software program that is GIS-based; this will help with reducing double-counting and will support other verification practices.
 - CS program is well funded and accurately verifies and tracks practices.
 - Cheating is known to occur. This is another vulnerability that the state is working to rectify.
 - Voluntary BMPs use a tracking process completed by district personnel.
 - Only ~50% farms allowed voluntary BMPs to be surveyed.
 - Wide range of findings after surveys. Some practices were found not be correctly implemented by farmer; therefore, not actually credited practice.
 - Shenk: What is VA's approach for non-cost share practices?
 - Sexton: Plan on applying methods of tracking cost share practices
 - Many BMPs discovered that don't meet NRCS standards, but may be functional equivalents and could be used in the future.
 - Potentially, use of farm audits or similar methods to resolve non-compliance issues with CS practices, but reluctance to use this approach.
 - Brosch: How were the six conservation districts chosen?
 - Sexton: Will send C. Brosch the information.
 - Brosch: Would the concept of farm audits have better reception if functional equivalents could potentially receive credit?

- Sexton: Difficult to determine what would be gained with additional knowledge.
 - Bredwell: When BMP not to meet NRCS specifications, were ways to bring the practice up to standards discussed with the farmer?
 - Sexton: District personnel discussed why practices implemented in certain way, but a matter of money and complicated regulations/definitions.
 - Cover crop inspection procedures need to be revised.
 - Need to improve the level of BMP standards knowledge amongst operators and conservation district (CD) staff.
 - Samadani: How do verification practices relate to the GIS tracking system and at what level of confidence?
 - Sexton: Structural verification process has high confidence with GIS tracking; however, feels vulnerable with cover cropping and CNT practices due to the timing of inspections and lack of evidence for verification.
 - All reported by lats/longs making re-verification easier and reducing double counting.
- MD (York): Not planning to change dramatically from what has been piloted and tested for verification and incorporated into the WIPs
 - Believes there may be great value in verifying non-CS and functional equivalent practices.
 - Non-CS or functional equivalent BMPs approach has been developed through several pilots; will plan to implement this method for the state.
 - Utilizing trained staff from CD's and private consultants to assess operations; verified by trained CD staff using a QAQC process.
 - Spot checks showing 80% compliance and 20% issues still pending.
 - Statewide training program for verifiers and state CD staff moving forward.
 - Results are just now coming in for farmer funded assessments in Baltimore Co. – still uncertainties.
 - Next issues to address: what is the length of time the reported BMPs are valid still needs to be determined for some BMPs, while the inspection period for other BMPs (e.g. conservation planning) has been determined.
 - The historic data management is an issue and may be harder to resolve than the non-CS data; lack of detailed GIS knowledge of where these practices exist in the counties for past information.
 - Horsley: Historic data issues may be present for most of BMPs except for those associated with animal waste management systems; feel that the state has verified these systems with CD staff multiple times.
 - Longevity of the BMP data needs to be resolved; however as the assessments are expensive.
 - Practice definitions and staff/operator training components of verification practices highly important.
 - Satellite imagery may also be employed in the future to assist with the verification of the data; beginning to develop the use of this technology for cover crops, but has application to many other BMPs.
 - Baseline data for the models is critical for accepting verified data. If the data is collected via an accepted verification process, it will need to be accepted by the models

- Shenk: Agrees with the importance of historical data clean-up, fixing double counting errors.
- Baird: Benefits to operators through contact with CD staff in increasing level of conservation and value back to the operator.
 - York: Benefits especially apparent as developing strict trading programs, which would provide financial gain to operators.
- Bredwell: Describe the reception of CD staff by operators.
 - York: Reception has been favorable, no problems.
 - Baird: Differing reactions to farm visits between VA and MD may reflect the potential gain for operators from these visits (e.g. potential trading). States need to determine farmers' wants for positive farm visits.
- WV (Spencer): A voluntary approach to document value of non-CS implementation.
 - See [WVDA Verification Protocol Concept Comments](#)
 - Seeking to develop a database that would be useful for NEIEN reporting.
 - Farm-by-Farm assessment is being implemented as most confident in the data obtained. Dates of implementation obtained by operator since the state does not have the ability to access NRCS data for the project.
 - Have started process of reviewing NRCS files to locate and identify the AWMS BMPs through the Cons. Agency and not the DoA.
 - Finding that CS practices are meeting the NRCS standards, however the non-CS BMPs may not meet standards but should be considered as functional equivalents in the models.
 - WIP goals do not include the non-CS data so could exceed the TMDL goals if functional equivalents are accepted.
 - Developed reference book to assist in communicating BMPs to operators by staff.
 - Shenk: The issue of improving data collected/counted is absolutely the reason for this exercise. Historic data cleanup is critical to insure adequate capacity in the models to accept new data; therefore, important for the AgWG to determine recommendation for functional equivalents.
 - Spencer: WVDA feels strongly that the verification information needs to be accepted due to level of effort and training, not to be reviewed again by district staff.
- PA (Taglang): Currently implementing the CTIC model with additional aspects to track and report tillage transect survey in 15 counties. Two year effort; first round has been completed and currently implementing QAQC.
 - See [PA Draft Verification Protocol Matrix Comments](#).
 - PA hopes that obtained data is acceptable based on prior coordination work with the CBPO
 - Believes value in tracking non-CS implementation, and functional equivalent acceptance is critical.
 - Farm x farm not viable for most BMPs; GIS tracking not always feasible.
 - Issue of limited resources.
 - Matrix comments:
 - Reliable funding: increases boots-on-the-ground; therefore, increases confidence. Boots-on-the-ground confidence should ~100%.
 - Difference between agency staff, third party, or ag industry needs to be examined.

- Dubin: Provides specificity on difference of verification due to potential conflicts of interests.
 - Numbers in matrix arbitrary and need to be a more accurate reflection/estimation.
 - Office records: medium cost.
 - Self-certification: higher than 0% confidence.
 - See similarities with DMR data from WWTP's.
- The survey method acceptance levels should reflect the CTIC values for tillage transects.
 - Interest in MD's remote sensing tracking of cover crops
- Annual practices should be represented separately from engineered practices in the accepted methods and levels of acceptance.
- Recognize the historic data is an issue that needs to be addressed; baseline data needs to be addressed as well since this may influence.
- Regulatory requirements exist on all farms in PA, but boots-on-the-ground staff are not regulators.
- Baird: acknowledges that by adding additional verification factors to a method there is the ability to improve on a acceptance level; should be reflected in the matrix.
 - Dubin: Follows the idea to layer or add elements to increase values of confidence or credit.
 - Taglang: Reluctance to spend money/effort prior to determination of credit.
- York: good job by WV and PA on their review and comments; hope that verification expert panel would include experts on survey verification.
 - M. Dubin and F. Coale will push for the inclusion of a survey verification expert on panel. Also, AGWG can send nominations for Verification Expert Panel.

ACTION: AGWG members to submit nominations for BMP Verification Expert Panel to M. Dubin and F. Coale.

- Spencer: What is the farmer engagement on the transect survey?
 - Tesler: Survey is a roadside assessment without contacting the operator
 - Taglang: Helps to clean up data quickly with an understanding of statistical variance and is inexpensive with cost of approximately 4 cents/acre.
 - No FOIA protection on the survey data in PA; most data collected by state agency is accessible.
 - Spencer: WV is using USDA-FSA maps to collect data and is FOIA protected.
 - Spencer: Plans for rechecks on survey data?
 - Tesler: Will re-survey to include GIS points, land uses at points, extra points to maintain data over time as some data points will be lost.
- NY (Ristow): Concerned with communication over the phone. Communication difficult during this important discussion.
 - See [NY Ag Verification Protocol Comments](#).
 - Interested in including non-CS BMPs in verification process; influences w/ USC by PA counties as well (Bradford)
 - Conducting on-farm assessments as part of state programs- voluntary Agricultural Environmental Management (AEM) program.
 - Process is good at capturing structural BMPs with farms participating in AEM; see a need to capture more BMPs such as annual and non-structural practices.

- Need to develop standard verification protocols for all partners in the state; especially for non-structural, annual practices.
 - Need to determine frequency of contact. Frequency of contact with operators involved in CS programs is better than those who are not.
 - In the matrix, a frequency category should be included for each method.
 - Develop a lifespan standard for each state and practice.
 - AEM is a tiered process. 1st tier is the baseline information from operator; 2nd tier is the on-farm assessment. Practice Rankings: 1 exceeds standards, 2 meets standards, 3 is a NRCS standard equivalent, 4 is not meeting any standard.
 - Emphasis on training as the factor to the qualification of the individual doing the assessment; do not see a difference in the background of the individual; i.e. third party vs. industry representative.
 - On-line management tool with a practice lifespan for each practice needs to be developed in NY to assist.
 - Employ a variety of methods to achieve verification to use limited resources.
 - On farm assessments are both positive and negative in benefits; farmer time to participate and limited staff resources.
 - USC paid to develop an on-line database management tool for CD's to use and will be available to all counties in NY; relevant to CDs that are outside of the Chesapeake Bay.
 - Geared towards finding a balance between CBP tracking for the model and relevance for all CDs.
 - Tool will be released soon, replacing a CD by CD survey of data method used now.
 - Trying to clearly define information w/ CD staff through extensive training of staff; hope to utilize for next NEIEN reporting period
 - Taglang: Cost breakdown for assessments?
 - Ristow: Not aware of a watershed-wide cost assessment.
 - Albrecht: Determine by: Tier II assessment takes ~5-8 hrs. Multiply time by hourly rate and add farmer's time.
- Coale: Summary of discussions:
 - A diversity of approaches and options will be needed, not as prescriptive as some members envisions. Flexibility of verification concepts must be included.
 - Difficulty will be in assigning the acceptance values. Last column of matrix will be filled in with assistance from experts, but must be thoroughly evaluated.
- Shenk: mixed options on matrix method. Concern with external groups weighing in on the final recommendations.
 - How do we communicate with them during the process to prevent last minute concerns? Should build into this process.
 - Importance of maintaining scientific defensibility.
 - Baird: Agrees that the acceptance values need to be developed w/ science background.
 - Dubin: Would like to determine relative order of prioritization.
 - Prior to setting numbers, establish categories and options and relative ranking. Then determine numbers with assistance from experts.
- York: Sees benefit of having a separate identification of confidence in the reported data and efficiency rating.

- Shenk: Still need to determine if efficiency level would remain the same and discount the number of acres for the level of confidence, or discount efficiencies somehow. Two methods.
- Horsey: Some approaches include confidence factor within final measure of output.
- Shenk: EPA does not recommend adjusting effectiveness values vs. number of acres/units accepted.
- Taglang: PA sees opportunity for considering both approaches to determine the best option.

Agricultural BMP Verification Comments – Non-Agency Representatives

- American Farmland Trust (Baird): Need to determine costs as part of the protocol discussion.
 - Benefits in including/examining other sector approaches in the discussion and coordination.
 - Consistent approaches and materials to inspire confidence and equality.
- Chesapeake Bay Commission (Raub): Public groups/environmental groups need to be a part of the discussion.
 - Consistency across the sectors and states to ensure equality.
 - Shenk: Some states might take a more rigorous approach than others, but a base level needs to be established first.
 - Dubin: Will need to have a careful discussion with other WG sectors to negotiate the process.
- American Farmland Trust (Baird): Recommends a specific cost column to be included in the matrix.
 - Cost/acre or unit costs to illustrate the public costs to implement verification.
 - Samadani: Variable costs of verification depending on practice. This should be a next step after the process framework is established.
- American Farmland Trust (Baird): Establish protocol of estimating the validity of systems used.
 - Look at private sector examples of auditing, etc for a practical basis.
- Poultry & Egg Association (Bredwell): Common theme of funding issues.
 - Potential disenfranchisement of farmers or BMPs.
 - Need to recommend a minimum threshold of verification, regardless of staffing or funding.
 - Spencer: Some jurisdictions do not have staff for a great deal of verification efforts, but shouldn't be penalized for that.
 - Royden: Verification begins with the WIP and the costs, but should not limit the discussions based on costs and allow all methods to be considered by the states. Determining methodology to verify should be the focus of this discussion.
 - York: Also, need to consider how many times you will need to approach the operator and the timing of assessments is important. Strategic methodology.
- DE (Davis): DE believes most practices are counted and does not see a need to account for non-CS practices.
 - Brosch: Is there any concern that data reported to CBP Model may be inaccurate or no longer in practice (e.g. conservation tillage)?
 - Davis: Such a small percentage, does not present great value compared to effort expended. Will complete some level of verification, but hesitant regarding staffing time.

- Chesapeake Bay Commission (Raub):
 - Supports the addition of a frequency column.
 - Albrecht: Concern that inclusion of time column for each practice will create a 3D matrix, increasing complication.
 - Shenk: Encourages focusing on initial verification and include a separate description/narrative piece on the frequency needs to simplify the matrix.
 - Examine how verification methodology is different from assessment method in column titling.
 - Alternative to on-farm assessment for verification after the initial assessment.
 - Encourages the development of an online tool for verification added to matrix.
- Environmental & Water Resources Management Consulting (Samadani):
 - Measuring WIP Progress includes: (1) plan development by cert. planners (2) plan implementation by operator, (3) plan implementation verification and evaluation by gov. agencies, (4) reporting effectively implemented BMPs; need to focus on confidence of implementation.
 - Protocol should guide states in the development of standard BMPs implementation reporting forms, and training operators to complete and submit implementation reporting forms to respective Gov. agency. Followed by onsite visit for verification and evaluation to improve the level of confidence.
 - Improved data collection and data base systems to ensure confidence of data quality and reporting of data to CBPO.
 - Sexton: If someone is receiving CS assistance, could potentially use opportunity to assess BMPs that have dropped out of the contractual data systems.
 - York: If the BMP is implemented as part of the CS system, that is different than non-CS. There are no requirements for non-CS BMP reporting.

Review of AGWG Draft Verification Protocol Concept

- See [Draft Agricultural Verification Protocol Concept](#)
- Vote on acceptance of matrix concept of a template for AGWG recommendations:
 - AFT (Baird) moves; VA NRCS (Delaney) seconds.
 - EPA wishes to have confidence levels are completed.
 - EPA asks that AgWG provides level guidance but does not need to provide actual numbers.
 - York: Will this approach is consistent for other sectors?
 - Dubin: Will have a better knowledge of this next week after meeting of the BMP Verification Steering Committee.
 - Majority approval vote but PA votes no.
- Baird: Requests that other sectors utilize a similar framework as the AgWG is considering for clear and equal rigor.
 - VA (Sexton) motions that the chair communicate with the other sector workgroups to ensure consistency, the same level of rigor; and offer to share the AgWG approach with other workgroups
 - PA seconds
 - All voted in the positive
- Matrix Category Review:
 - Sexton: Acceptance and equal confidence for verification by any trained personnel; therefore, combine categories differentiating verification personnel.

- Shenk: However, being clear in the categories is important, even though the categories may all have the same confidence levels.
 - Baird: Also, different cost factors associated with the various methods.
 - Brosch: The three groups also may advocate for different things, making it important to keep separate
 - Spencer: WV concern with independent third party with access to FSA maps and privacy of the data collected.
- Shenk: Regarding the second column, EPA sees this as inventory assessment method for naming the category and noting the options for out years.
- Taglang: PA concerned with on-farm inventory category. Recommend to use On-Farm Assessment title rather than inventory.
- Raub: Does this indicate a total assessment for all BMPs or only partial?
 - Coale: Could involve either all or partial BMP assessment.
- York: Concerns about Self Assessment for second three rows as this is a different method than a farm inventory.
 - Self assessment with 5-10% spot checks provides higher level of confidence than govt./third party
- Taglang: PA recommends single Record Review category.
 - Shenk: Concerned with office records review that assesses implemented vs. planned BMPs.
 - Dubin: Some BMPs are planned such Cons. Plan that have a specific lifespan (i.e. 10yrs.)
- York: MD suggests spot checks for compliance checks if other records not submitted.
 - Review of records that does not have an on the ground assessment; can be accomplished at the office
- Transects for certain BMPs only.
 - Sexton: Determine interval of points for quality of data
 - Taglang: Rename Statistical Survey for category?
- York: Suggests rows for: transect survey, CEAP/NRI, Aerial Imagery, NASS (multiple types of surveys).
- Baird: Open options in each category will allow diversity.
 - Shenk: concerned that too many option will lead to complicated matrix.
- Coale: Need to determine relative values/costs to implement. Vote on low, medium, high scale. Relative cost column should reflect total verification costs
 - York: Suggest to take out relative benefit column
 - On-Farm Assessment: all high costs
 - Self-Assessment: medium (#4) to low
 - Record Review: medium
 - Statistical Survey: transects are low cost
 - CEAP/NRI: high cost
 - NASS: medium
 - Areal imagery: medium
- Relative Confidence per Row (1= low confidence, 5=high confidence)
 - On-Farm Row 1: #5
 - On-Farm Row 2: #5
 - On-Farm Row 3: #4
 - Self Assessment Row 1: #4-5

- Self Assessment Row 2: #2 annual, #4 structural
- Self Assessment Row 3: (5-10% spot check)# 3
- Self Assessment Row 4: #2 annual, #3 structural
- Office Records: #4
- Farm Records Row 1: #3-4
- Farm Records Row 2: #3-4
- Farm Records Row 3: #3-4
- Transect Survey: #1-4
- Statistical Survey: # range
- Imagery: # wide range

Participants

Fred Samadani- Environment and Water Resource Management Consulting

Tim Sexton- VA DCR

Blaine Delaney – VA NRCS

Beth Horsey- MDA

Dana York- MDA

Royden Powell - MDA

Kenn Pattison- PA DEP

Steve Taglang- PA DEP

Ted Tesler – PA DEP

Sam Spencer – WVDA

Douglass Griffith - WVDA

Aaron Ristow – Upper Susquehanna Coalition

Greg Albrecht – NY Dept. of Ag and Markets

Robert Baldwin- DE DNREC

Mark Davis - DE DNREC

Ken Hyre – USGS

Susan Marquart – NRCS

Susan Marquart- NRCS

Frank Coale- UMD

Mark Dubin- UMD/MAWP/CBPO

Kelly Shenk- CBPO/EPA

Jim Baird- American Farmland Trust

Chris Brosch- WSI

Bill Angstadt- DMAA

Hank Zygmunt

Molly Harrington- CBPO

Marel Raub - Chesapeake Bay Commission

Jeff Crawford - Northeast Pasture Consortium

Erin Lane – VA Tech

Paul Bredwell – US Poultry & Egg Association

