

EPA's Conditional Approval of Delaware's Revised Draft BMP Verification Program Plans

January 26, 2016

EPA has conditionally approved Delaware's November 14, 2015 revised draft BMP verification program plan. Conditional approval means that the revised draft plan addressed most of the Panel's/workgroup coordinator's/EPA initial feedback but some limited 'holes' in the documentation which EPA feels can be easily addressed by the jurisdiction and that the plan was generally written and presented in a public friendly, easy to understand format/text.

Conditional approval also means that Delaware can apply for 2016 WIP assistance funds. Prior to award of Delaware's 2016 Chesapeake Bay Implementation Grant and Chesapeake Bay Regulatory and Accountability Grant, EPA will need to be in a position to fully approve Delaware's final revised BMP verification program plan.

Delaware's revised draft BMP verification program plan was generally consistent with the basinwide framework and its sector verification guidance. The revised draft plan provided an excellent level of documentation using text and formats easily readable and understandable by a wide audience. Delaware was very clear in documenting its choices of verification protocols and the rigor in their protocols in relationship to the BMPs and their contribution to overall nutrient and sediment reductions called for in their Phase II WIPs. However, there are still a number of comments which were only partially addressed or not addressed at all.

Thanks for investing the time to develop these responses to the major comments which EPA shared with Delaware. Below, embedded below each of Delaware's responses you will find EPA's responses to your responses. If Delaware fully responds to each of EPA's below responses within a final revised BMP verification program plan, then EPA will be positioned to approve Delaware's final revised plan and we can all turn our attention towards the two-year ramp up period.

Please submit to Rich Batiuk, at batiuk.richard@epa.gov, a final revised BMP verification program plan by Friday, March 4th. Please include a copy of the below remaining major comments annotated with the pages numbers where each remaining comment was addressed in the program plan. This will ensure there is time for final EPA review and approval of Delaware's final revised BMP verification program plan prior to EPA and Delaware working together on the forthcoming award of Delaware's 2016 Chesapeake Bay Implementation Grant and Chesapeake Bay Regulatory and Accountability Grant.

Finally, for your reference and consideration as Delaware works to further enhance its BMP verification program over the coming two years, attached please find a compilation of EPA's reviews of Delaware's November 14, 2015 Revised Draft BMP Verification Program Plan in the form of a series of evaluation forms.

EPA's Responses to Delaware's Responses to the Remaining Major Comments

Overall

- Delaware clearly documented its lower priority BMPs for which verification protocols have not yet been submitted, but did not provide specific timeframes for providing verification protocols for these low and medium priority BMPs, as well as a description of the envisioned level(s) of verification, recognizing the Basinwide Framework allows for less rigorous levels of verification for these low priority practices.
 - All of the remaining lower priority BMPs are either (1) accounted for in NRCS inspections at 5% per year; (2) have numeric milestones established but have not been reported; or (3) are not approved BMPs. Please see below for list of low priority BMPs not listed in the Verification Program.
 - NRCS inspected BMPs @ 5% per year:
 - Pasture alternative watering
 - Prescribed grazing
 - Precision intensive rotational grazing
 - Stream access control with fencing
 - Barnyard runoff control
 - Loafing lot management
 - Have numeric MS and not reported
 - Carbon sequestration
 - Not approved
 - Cropland irrigation management
 - Heavy use area pads
 - If the aforementioned become high priority BMPs in the future, DE will develop a timeframe for verification.
 - DE will develop a verification program for cropland irrigation management (currently using methodology listed in Appendix B) and heavy use area pads, once approved by CBP.

EPA RESPONSE: Thanks for spelling all this out. Please just document all the above clearly within your final draft plan and this will address the above comment.

Agriculture

- For nutrient management verification, there is some discrepancy between what is presented in this BMP verification document for nutrient management planning and what EPA heard about the nutrient management planning program from DDA during EPA's animal agriculture program assessment.
 - The Chesapeake Bay Program Nutrient Management Phase 5.3.2 Crosswalk, submitted by Delaware will supplement BMP data submissions for the recently approved Nutrient Management tiers and will be used to justify the crediting of the reported acres of nutrient management by tier, thereby providing confidence in the acres credited under each tier level. Once final, this report will be used for all nutrient management tiers in Delaware's QAPP and Verification Plan.

- Since the animal agriculture program assessment review, DDA NMP has undergone new leadership. EPA should pay more attention to recent communication, with the new leadership, than the older communications.

EPA RESPONSE: We have already experienced a difference with the new NMP leadership now in place, but we still need solid documentation for Delaware’s plans for verification of nutrient management into the future under that new leadership for public transparency. Referencing and summarizing the Phase 5.3.2 crosswalk in in the final revised plan is a step in the right direction as we anticipate your NMP and verification protocols within it will continue to evolve in the coming years.

- EPA agricultural program assessment determined that DE does not inspect or review all NMPs upon development or initial implementation and that DE does not receive all annual reports.
 - No state reviews all NMPs in advance of the plan being established. No state has 100% response rate. As a result of EPA’s review, DDA is investigating programmatic changes to improve the annual report response rate.

EPA RESPONSE: EPA is not expecting reviews in advance of the plans being developed but certainly “upon development or initial implementation.” Please clarify within your final revised BMP verification program plan your current or planned inspection/plan review levels.

- Delaware provided sound documentation on the CTIC protocol and their design choices, but did not provide documentation on how they plan to translate the findings from the statistical survey into the actual numbers and geographical distribution of practices submitted through NEIEN for crediting through the Partnership’s annual progress runs.
 - At the conclusion of the survey, the percentage of observations for each residue BMP type (High Residue Tillage and Conservation Tillage including High Residue Tillage) are reported county wide to NEIEN. These percentages are then simulated by the model for acreage calculation.

EPA RESPONSE: Thanks for the short description—please incorporate this explanation into the final revised plan documentation and that will address this comment.

- Delaware needs to document how it merges the results of inspections of cover crop cost share acreages and CTIC-based survey estimated acreages to prevent double counting of acreages.
 - Acres of CTIC-based survey estimated cover crops are reported utilizing the methodology that was approved by the Agricultural Workgroup at the September 2015 meeting. The cover crop observation percentages that were made during the survey were categorized by species, planting time, and planting method based on the NEIEN appendix for approved cover crop BMPs. The observation percentages for each of the cover crop categories were then applied the 2012 NASS county-wide harvested cropland acreages, yielding estimated acreages for traditional cover crops based on the survey. The acreages for each cover crop category reported by the county

conservation districts are then subtracted from the matching cover crop category calculated from the CTIC-based survey. The acres left are submitted through NEIEN at the county-wide level, where model simulation calculates acreages within the watershed. NRCS acres of cover crops are not reported in order to prevent double counting of cover crops.

EPA RESPONSE: Thanks for the short narrative—please incorporate this explanation into the final revised plan documentation and that will address this comment.

Forestry

- Delaware’s protocol addresses the Forestry Workgroup’s verification guidance recommendation for 100% inspection at planting and 100% inspection near the end of contract, it still does not address the Forestry Workgroup’s guidelines for two sets of inspection during years 1-4 and then again during years 5-10.
 - Taken from page 97 of the Verification Plan - *In Delaware, DDA DFS installs most large scale buffer and tree planting projects. DFS inspects **100% of plantings post installation**. Approximately **1 year after planting**, DFS inspects the projects again (100%). One hundred percent of the buffer and tree planting projects are spot checked on average **every 7.5 years** by the cost sharing agency (NRCS, DFW, DFS, etc). During this time, projects are assessed for water quality impacts. NRCS verification timing will be at the organization’s discretion. A **final inspection is completed at contract or lifespan expiration (approximately 10-15 years)**. Once project lifespan or contract expires, Delaware will use high resolution imagery and Light Detection and Ranging (LiDAR) data to determine the existence of riparian forest buffer and tree planting practices.*

EPA RESPONSE: Thanks for extracting out the above text and highlighting the timing of the inspections. (Clearly by page 97, some of us were not reading the text careful enough!)

- In summary, DE will inspect/verify according to the FWG recommendations:
 - “*post installation*” – FWG inspection recommendation at implementation
 - “*1 year after*” – FWG inspection recommendation during years 1-4
 - “*checked on average every 7.5 years*” – FWG inspection recommendation of 5-10 years
 - “*final inspection at contract/lifespan expiration....10-15 years*” - FWG inspection recommendation of 5-10 years

EPA RESPONSE: Excellent to hear Delaware’s commitment to an inspection schedule fully consistent with the Partnership’s Forestry Workgroup’s recommendations. Please make that commitment clear within Delaware’s final revised BMP verification program plan. Once that is made clear, the above comment will be addressed.

Stream Restoration

- Delaware plans to develop a function based assessment but needs to describe the timeline and possibly cite current models for functional assessment as models.

- DE plans to use the Rapid Stream Restoration Monitoring Protocol methodology established by the Chesapeake Bay Field Office and US Fish and Wildlife Service. DE has no plans to develop a separate function based assessment.

EPA RESPONSE: Good to hear of Delaware’s plans to use the existing USFWS protocol— please clearly document that within Delaware’s final revised BMP verification program plan, citing and providing a URL link back to the above reference USFWS protocol document. This approach is fully consistent with the Partnership’s Stream Restoration Workgroup’s guidance and will address the above comment.

- Delaware should complete the requests above to improve the BMP such as adding specific criteria for time to correct problems and details of what is reported after the original 5 year period.
 - In table 2.3.1.1, DE plans to “Inspect every year for first 3 years, once every 5 years after established and/or after major storm events” and “structures to be fixed if funding available. If cannot be achieved remove from database”. Therefore, if compliance is not achieved all practices will no longer be reported to NEIEN for credit in the CBWSM.
 - To date, most of these projects completed are on tax ditches that have a permitted easement for maintenance by the tax ditch organization which are governmental subdivisions of the state.

EPA RESPONSE: Thanks for the clarification and additional documentation. Please add this text to Delaware’s final revised BMP verification program plan and this will address this comment.

Wetlands

- Unsure if onsite monitoring was required within 3 years following construction or whether aerial imagery is used for remote observation of long-term monitoring of wetland BMPs.
 - On page 112, *“Once the restoration project has been implemented, all projects will be monitored at least once every five years through an onsite visit. The site may be monitored through offsite aerial imagery or remote sensing methods the other 4 years. Certain circumstances may also warrant more frequent onsite visits than the minimum 1 in 3 year requirement.”*
 - The excerpt above from Pg. 112 of Delaware’s QAPP and Verification Plan acknowledges that onsite monitoring of each wetland restoration project will occur at least once every 5 years. The other 4 years will utilize remote sensing or aerial imagery. The sentence indicating more frequent onsite visits may be required than the 1 in 3 year requirement should read “Certain circumstances may also warrant more frequent onsite visits than the minimum 1 in 5 year requirement.”

EPA RESPONSE: Thanks for pointing out the location of the language already in your revised draft plan on page 112. Please clarify in your existing language in the plan that “The site ~~may~~ **will** be monitored through offsite aerial imagery or remote sensing methods the other 4 years” as stated in your above responses. And thanks for making the correction in referencing the

minimum 1 in 5 year requirement in Delaware's final revised BMP verification program plan's text. With these two changes made, this comment will be addressed.