

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

January 26, 2016

NY responses March 4, 2016

EPA has conditionally approved New York'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 New York can apply for 2016 WIP assistance funds. Prior to award of New York's 2016 Chesapeake Bay Implementation Grant and Chesapeake Bay Regulatory and Accountability Grant, EPA will need to be in a position to fully approve New York's final revised BMP verification program plan.

New York has a strong commitment to on-farm verification through commitments to conducting whole farm visual assessments for 100% of farms participating in AEM (non-cost shared BMPs), 100% of farms under contract (cost shared BMPs); and 100% of CAFO permitted facilities (permit issuing programs) as documented within the revised draft BMP verification program plan. However, the details on the actual verification protocols were lacking. Urban stormwater described the data tracking and reporting processes in detail, with limited references to actual BMP verification protocols. The document does not fully address non-agricultural BMPs such as forest harvesting, wetlands or stream restoration. On January 4, 2016, New York provided detailed responses to each of the remaining major comments, enabling EPA to conditionally approve New York's draft revised BMP verification program plan.

Thanks for investing the time to develop these responses to the major comments which EPA shared with New York. EPA's receipt of these detailed response enabled the Agency to conditional approve New York's revised draft BMP verification program plan. Below, embedded below each of New York's responses you will find EPA's responses to new York's responses. If New York fully addresses each of EPA's below responses within a final revised BMP verification program plan, then EPA will be positioned to fully approve New York's final revised program 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 New York's final revised BMP verification program plan prior to EPA and New York working together on the forthcoming award of New York's 2016 Chesapeake Bay Implementation Grant and Chesapeake Bay Regulatory and Accountability Grant.

Finally, for your reference and consideration as New York works to further enhance its BMP verification program over the coming two years, attached please find a compilation of EPA's

reviews of New York's November 14, 2015 Revised Draft BMP Verification Program Plan in the form of a series of evaluation forms.

EPA's Responses to New York's Responses to the Remaining Major Comments

Overall

- **EPA:** Identified practices for which verification protocols have not yet been developed, but did not provide schedule or envisioned verification levels.
 - **NY Response:** New York provided a list of practices and associated verification protocols in the documents submitted on 11/16/15. See Table 1 in Appendix 6: Statistical Sampling Approach to Agricultural BMP Verification in New York State for a list of agricultural practice types (i.e. multi-year and annual) and verification protocols. The breakout of practices listed in Table 5 of Appendix 6 is as follows:
 - Visual Multi-Year: Animal Waste Management Systems, Barnyard Runoff Control, Forest Buffers, Grass Buffers, Grass Buffers TRP, Land Retirement, Precision Rotational Grazing.
 - Visual Single-Year: Cover crops, Conservation Tillage.
 - Non-Visual Single-Year: Nutrient Management, Precision Feeding, Conservation Plans.

EPA RESPONSE: Thanks for pointing this out. In New York's final revised BMP verification program plan, please spell out these practices in the main text as well as your EPA colleagues clearly missed this list of practices back in the appendices.

NY Response 3/4/16: This information is now provided in Table 1 on page 11 of the Nonpoint Source QAPP.

- **EPA:** The document does not fully address non-agricultural BMPs such as forest harvesting, wetlands or stream restoration.
 - **NY Response:** To-date, we have focused our verification procedures on practices that are more important in terms of load reductions and are more readily verified through existing mechanisms. As described in Section A9: Documentation and Records on page 9 of the Nonpoint Source QAPP submitted on 11/16/15, New York currently tracks **stream restoration** projects, but does not report them to the Bay Program and has not yet fully developed verification procedures. **Wetland restoration** is tracked and reported to the Bay Program, but does not result in functional change or load reductions in the watershed model, so we have not fully developed verification procedures. New York does not currently track or report **forest harvesting** BMPs and verification procedures have not been developed.

EPA RESPONSE: New York was following the Partnership's BMP verification framework guidance in putting your focus on those practices which are contributing the most to planned load reductions. In New York's final revised BMP verification program

plan, please provide the above documentation in the main text so that your readers fully understand the current situation and New York's future intentions.

NY Response 3/4/16: A statement about **forest harvesting** BMPs was added to the Point Source QAPP, in Section 6: Forestry Data. Information about **stream restoration** and **wetland restoration** is now provided in the Nonpoint Source QAPP in section A4.1 on page 10, section A9.1 on page 19, and section D2 on page 31.

- **EPA:** New York needs to make it clear as to which practices they don't plan to report on into the future—urban riparian buffers, tree planting, septic systems.
 - **NY Response:** As noted above, to-date New York has focused verification efforts on practices that are more important in terms of load reductions and are more readily verified through existing programs and current verification procedures reflect that focus. There are some practices (e.g. the ones noted in EPA's comment) that we do not currently track, report or verify and we did not realize initially that EPA expected these practices to be specifically addressed in our procedures. We plan to update our QAPP documents in the future to provide information about these practices. In addition, EPA has given jurisdictions a 2-year timeframe to ramp-up verification protocols and currently our protocols focus on agricultural practices that account for >5% of nutrient and sediment reductions. Moving forward during the pilot phase, we will evaluate those agricultural BMPs that account for ≤5% of the load reductions. Stream restoration is an example of this: As described in the Nonpoint Source QAPP, New York is currently tracking, but not reporting, stream restoration projects because we don't have a mechanism to do so with current data systems. Improving tracking, reporting and verification of stream restoration will be a focus in the next 2 years.

EPA RESPONSE: Again, New York was following the Partnership's BMP verification framework guidance in putting your focus on those practices which are contributing the most to planned load reductions. It's great to hear of New York commitments into the future. EPA is asking New York to clearly communicate its future intentions to its other partners, stakeholders, and interested public. In New York's final revised BMP verification program plan, please provide the above documentation in the main text so that your readers fully understand the current situation and New York's future intentions.

- **NY Response 3/4/16:** A statement about **septic systems** was added to the Point Source QAPP, in Section 4.4: Onsite Wastewater Treatment Systems. Information about nonpoint practices is now provided in section A4.1 on page 10 of the Nonpoint Source QAPP.
- **EPA:** The QAPP relies very heavily on compliance and enforcement inspections at WWTPs, MS4, CSOs and CAFOs, but does not indicate how often facilities are inspected.
 - **NY Response:** CAFO inspection rates were included in Appendix 6 of the Nonpoint Source QAPP submitted on 11/16/15. See page 33, second paragraph

under the heading, “Selecting Sites to Inspect for Follow-Up Verification”: “A comparison of Tables 1 and 2 shows that follow-up inspections of BMPs at CAFOs will be 2.5 times (50% vs. 20%) that required by the Chesapeake Bay Program. Approximately 50 percent of CAFO-permitted farms are inspected by NYSDEC and/or USEPA annually (or 100 percent every two years; essentially verification by census). During those inspections, follow-up BMP inspections are performed to verify all BMPs submitted for annual progress reporting. Any BMPs not meeting performance criteria will be improved according to permit compliance policy or removed from reported BMPs.”

Compliance and enforcement procedures for **WWTPs, MS4s and CSOs** are described in *Section 7: Compliance and Enforcement of Point Sources* of our Point Source QAPP. We will include more specific information about inspection rates for these facilities in future versions of the QAPP, but in general, DEC inspects 100% of Significant WWTPs and CSOs each year; 30-50% of Non-Significant WWTPs each year; and 25-50% of MS4s each year.

EPA RESPONSE: Thanks for directing us to the text in the appendix describing New York’s CAFO inspection rate. In New York’s final revised BMP verification program plan, please provide a short reference to these inspection rates up in the main text and then direct the reader to the appendix for more specific information.

Thanks for New York’s commitment to provide more specific information on inspection rates into the future. Please include the above text in In New York’s final revised BMP verification program plan so readers are well aware of your future intentions.

NY Response 3/4/16: The compliance frequency information above has been added to the Point Source QAPP, in Section 8.2.1: Frequency of Compliance Inspections. The information for CAFOs is now provided in Table 4 on page 30 and in section D2.1 on page 33 of the Nonpoint Source QAPP.

Agriculture

- **EPA:** Overall, NYS agricultural QAPP is very difficult to read and understand. Some sections are clearer to understand, whereas others are not. Terms are used interchangeably (e.g. Section vs Group). The “Statistical Sampling Approach to Agricultural BMP Verification in NYS” document appears to be much more straightforward and direct. It is recommended that NYS ensure its QAPP is transparent and user friendly to the public.
 - **NY Response:** New York will work to improve clarity and consistency in future versions of verification procedures.

EPA RESPONSE: Thanks for recognizing the importance of providing very clear, easy to read and understand documentation for the extremely diverse audiences for this documentation. EPA encourages New York to read through Maryland, Delaware, and Pennsylvania’s program plan descriptions of their agricultural BMP verification programs—each take a different approach, but each also provides solid documentation and excellent URL links to more detailed information. EPA strongly encourages New York to permanently borrow (sounds better than steal!) good ideas from its partners.

NY Response 3/4/16: The revised Nonpoint Source QAPP has been revised and reformatted for improved clarity.

- **EPA:** The revised draft program plan only states that agricultural BMPs (annual or single year) will be reported in New York’s AEM data management system when they are verified (once). Multi-year structural BMPs are only reported once (section A5:4). Details are not given re: how identification or verification is done even though section B10:3 states details are provided in section A9:1 when they are not.
 - **NY Response:** Verification protocols and approaches for initial verification, follow-up or re-verification of annual and multi-year practices are provided in Appendix 6 of the Nonpoint Source QAPP submitted on 11/16/15. We will work to include language in the appropriate QAPP document sections in future versions of the QAPP.

EPA RESPONSE: Please provide additional text in the main section of New York’s final revised BMP verification program plan which informs the reader about these agricultural practice verification protocols and then directs them to Appendix 6 for details.

NY Response 3/4/16: This information is now provided in the Nonpoint Source QAPP in section D2 beginning on page 31 and summarized in Table 6 on page 35.

- **EPA:** “Statistical Sampling Approach to Agricultural BMP Verification in NYS” document states NYS will be using an adaptive management approach in selecting sites to inspect for verification. Techniques used to inspect BMPs at selected sites and record & track findings are not described. Unable to clearly discern NYS inspection other than NYS intent to do “whole farm” approach and the AEM system.
 - **NY Response:** Table 2 starting on page 31 of Appendix 6 of the Nonpoint Source QAPP lays out the techniques for each BMP selected for initial inspection, follow up check and lifespan/sunset checks. New York will use on-site visual assessments and on-site record reviews for all three of the verification steps during a BMP’s lifespan. On-site assessments for Visual – Multi Year BMPs are employed to determine if the BMP meets the standards/Chesapeake Model definition and is performing as intended according to a visual inspection supported by AEM Tier 2 Worksheets, AEM Tier 5B Checklists, NRCS standards, and any management records. A similar approach is used for Visual –

Single Year BMPs, except that the inspection is timed to occur when the BMP can be visually observed (e.g., late fall through spring for Cover Crops). On-site assessments for Non Visual – Single Year BMPs are also used to determine whether or not the BMP meets the standards/Chesapeake Model definition and is performing as intended according to a review of farm management records and further assessment with AEM Tier 2 Worksheets, AEM Tier 5B Checklists, and NRCS standards. We look forward to the pilot phase of the new BMP Verification Protocols to test and further refine these methods.

EPA RESPONSE: Please incorporate the above text in the main section of New York’s final revised BMP verification program plan so that the reader understands what New York has currently in place and what New York’s future plans are over the coming 2-year ramp up period.

NY Response 3/4/16: This information is now provided in the Nonpoint Source QAPP in section D2.2 beginning on page 33.

- **EPA:** For on-site non-visual assessments of plans for Nutrient Management, revised draft program plan does not identify the assessment methods utilized to verify each component of the plans, the degree of compliance with the CBP-defined practice standards, or the ability to track and report data on compliance levels of each component or standard.
 - **NY Response:** The on-site, non-visual assessment for nutrient management is similar to the verification of other non-visual, single year BMPs and determines if the BMP(s) was implemented according to the farm’s plan (i.e., a current plan based on NRCS definitions for that management area) and/or BMP definitions from Scenario Builder documentation. For nutrient management in NYS, the plan is based on the NRCS 590 Nutrient Management Standard (either stand-alone or as a part of a broader-based CNMP) and the plan criteria are linked to specific tiers of nutrient management in Scenario Builder for reporting purposes. The assessment of if nutrient applications and other management practices were performed according to the farm’s 590 nutrient management plan is based on review of: The 590 plan; nutrient application records; soil and manure analyses; manure application setbacks; crop rotation records; and farmer discussion.

EPA RESPONSE: Thanks for the detailed response—that’s exactly the level of documentation EPA is seeking. Please incorporate the above text in the main section of New York’s final revised BMP verification program plan so that the reader can more fully understand what verification protocols and procedures New York has currently in place.

NY Response 3/4/16: This information is now provided in the Nonpoint Source QAPP in section D2.2 beginning on page 33.

- **EPA:** Need direct links to the actual AEM on-farm inventory procedures.

- **NY Response:** New York plans to use the AEM Tier 5B BMP Evaluation Requirements Checklist for AEM Base Program and The Tier 5B Conservation Plan Evaluation Requirements checklist for the AEM Base Program. We will add links to a future version of our Nonpoint Source QAPP.

EPA RESPONSE: Please incorporate the above text in the main section of New York’s final revised BMP verification program plan and add in the URL links.

NY Response 3/4/16: Appendix 8 and Appendix 9 of the Nonpoint Source QAPP are the *AEM Tier 5B BMP Evaluation Requirements Checklist for AEM Base Program* and *Tier 5B Conservation Plan Evaluation Requirements Checklist for the AEM Base Program*, respectively. Appendix 2 is the *AEM Tier 2 Worksheet-Nutrient Management: Manure and Fertilizer*, which is included as an example of Tier 2 worksheets. A URL is provided to link to the other Tier 1 and Tier 2 worksheets and associated technical materials.

- **EPA:** QAPP discusses USC’s trainings and certifications and various roles they play. However, the QAPP does not describe or identify the role of the USC members as they relate to agriculture inspections and AEM program.
 - **NY Response:** The role of USC members in the AEM program is described in the Nonpoint Source QAPP submitted on 11/16/15. Descriptive information is in both the main body of the QAPP and Appendix 6. Specific references include:
 - Section A4:2 on page 3: *The USC relies on the New York State funded Agricultural Environmental Management (AEM) program (<http://www.nys-soilandwater.org>) as its framework for data collection, reporting, and verification of Agricultural BMPs. AEM is the state-wide “umbrella program” that provides a consistent format to efficiently identify and address environmental concerns through a comprehensive on-farm assessment. AEM utilizes a five-tiered process that includes inventory, assessment, plan development, implementation and evaluation (<http://www.nys-soilandwater.org/aem/index.html>). The inventory and documentation of existing BMPs occurs during any one of the five tiers, depending on where each particular farm is in the process.*
 - Section A4:2 on page 4: *USC Team personnel along with USC Member SWCD technicians are all involved in the collection and reporting of data for all 3 focus areas.*
 - Section A9 on page 9: *Bullets 1-4 all refer to the work completed by USC SWCD members and their involvement in tracking and documenting of practices as well as CAFO inspections.*
 - Table 2 of Appendix 6 on page 31 identifies SWCD and USC members’ involvement in the verification process.

EPA RESPONSE: Thanks for pointing out all this existing documentation which fully addresses our above comment.

NY Response 3/4/16: Additional information has been added to the Nonpoint Source QAPP. Key Project Staff and responsibilities are now in section A4.2 beginning on page 12 and verification roles are summarized in Table 6 on page 35.

Forestry

- **EPA:** There is no forestry section in the revised draft program plan.
 - **NY Response:** New York does not currently track or report forest harvesting practices and has not developed verification procedures. We will add a statement about this in a future version of the QAPP.

EPA RESPONSE: Please add text in the main section of New York’s final revised BMP verification program plan providing this explanation.

- **NY Response 3/4/16:** A statement about forest harvesting BMPs was added to the Point Source QAPP, in Section 6: Forestry Data. Additional information is also provided in the Nonpoint Source QAPP in section A4.1 on page 10.

Stormwater

- **EPA:** New York addresses tracking, verification and reporting of erosion and sediment control for active construction but not stormwater management for post-construction.
 - **NY Response:** Collection of both ESC data and post-construction BMP data is described in *Section 5.1 Collecting construction stormwater BMP data* on page 16 of New York’s Point Source QAPP. Reporting of this data is described in *Section 5.2 Reporting construction stormwater BMP data* on page 17. As described in the QAPP, New York is able to track both ESC and post-construction practices, but has historically only been able to report ESC data because of difficulties converting to NEIEN XML format. We expect to resolve these issues in the future and will expand this section to cover verification when we do and become able to report post-construction practices.

EPA RESPONSE: Thanks for the detailed response. Please add text in the main section of New York’s final revised BMP verification program plan providing this explanation.

- **NY Response 3/4/16:** The stormwater section of the Point Source QAPP (Section 5: Stormwater Data) has been revised to better describe the process New York follows to collect, report and verify stormwater BMP data, including ESC and post-construction practices. A statement about the issues with post-construction data has been added to Section 5.2: Reporting Construction Stormwater BMP Data and Section 5.3: Verifying Stormwater Data.
- **EPA:** When a stormwater BMP has been inspected and found to meet standards, there is no documentation on New York’s plans to ‘restart the clock’ on that practice and apply a new life span.

- **NY Response:** See response to previous comment. We plan to develop verification procedures in the future when we are able to report more stormwater data.

EPA RESPONSE: Please add text in the main section of New York’s final revised BMP verification program plan providing this explanation.

- **NY Response 3/4/16:** The stormwater section of the Point Source QAPP (Section 5: Stormwater Data) has been revised to better describe the process New York follows to collect, report and verify stormwater BMP data, including ESC and post-construction practices. A statement about the issues with post-construction data has been added to Section 5.2: Reporting Construction Stormwater BMP Data and Section 5.3: Verifying Stormwater Data.
- **EPA:** When a stormwater BMP has been inspected and found not to meet standards, there is no documentation of New York’s process for corrective maintenance and the application of a new life span, or alternatively, to remove it from the state’s tracking data base.
 - **NY Response:** See previous two responses. We plan to develop verification procedures in the future when we are able to report more stormwater data.

EPA RESPONSE: Please add text in the main section of New York’s final revised BMP verification program plan providing this explanation.

- **NY Response 3/4/16:** The stormwater section of the Point Source QAPP (Section 5: Stormwater Data) has been revised to better describe the process New York follows to collect, report and verify stormwater BMP data, including ESC and post-construction practices. A statement about the issues with post-construction data has been added to Section 5.2: Reporting Construction Stormwater BMP Data and Section 5.3: Verifying Stormwater Data.
- **EPA:** Stormwater program description is based on New York’s erosion and sediment control construction general permit program. References to the “DEC SPDES Inspector Guidance Manual” are made on page 21, but no URL links provided and no description of the verification protocols addressed by this manual.
 - **NY Response:** The inspector guidance manual is available on DEC’s internal website as part of a broader “Compliance Toolbox” developed to guide Division of Water inspectors during all types of inspections (WWTP, CAFO, MS4 and Construction Stormwater). The guidance manual referenced on page 21 of the Point Source QAPP is specific to compliance inspections at municipal and industrial WWTPs and summarizes the approach that inspectors use for these types of inspections. *Section 7: Compliance and Enforcement of Point Sources* in the Point Source QAPP is intended to describe how the existing NPDES (SPDES in New York) compliance system contributes to verification in the Bay watershed

– in particular for the wastewater sector – as suggested in the Bay Program’s Verification Framework (Appendix B, p. 100-101).

EPA RESPONSE: Please incorporate the above text into New York’s final revised BMP verification program plan and provide URL links to the above referenced guidance manual.

- **NY Response 3/4/16:** A statement about the Compliance Toolbox was added to Section 8.2.2: Guidance for Compliance Inspections. A footnote was added on the same page with a link to the Division of Water’s internal webpage for the Compliance Toolbox.

Stream Restoration

- **EPA:** No verification protocols were submitted for stream restoration practices.
 - **NY Response:** New York did not submit verification protocols for Stream restoration practices as we are not yet receiving credit for these practices and they currently are <5% of the load reduction. As described in our Nonpoint Source QAPP, we plan to investigate the reporting and verification of stream restoration practices the next two years, during the Bay Program’s verification ramp-up phase. See Section B10 on page 11 of the Nonpoint Source QAPP for a description of current stream restoration procedures.

EPA RESPONSE: Please add text in the main section of New York’s final revised BMP verification program plan providing these explanations.

NY Response 3/4/16: This information is now provided in the Nonpoint Source QAPP in section A4.1 on page 10. Additional details are provided in section A5.3 on page 15, in section A6 on page 16, in section A9.1 on page 19, and in section D2 on page 31.

Wetlands

- **EPA:** No wetlands verification protocols were provided in the revised draft verification program plan.
 - **NY Response:** As noted above and in the Nonpoint Source QAPP, New York has not fully developed verification procedures for wetland restoration, but may in the future.

EPA RESPONSE: Please add text in the main section of New York’s final revised BMP verification program plan providing this explanation.

NY Response 3/4/16: This information is now provided in the Nonpoint Source QAPP in section A4.1 on page 10. Additional details are provided in section A4.2, in section A5.3 on page 15, in section A6 on page 16, in section A9.1 on page 19, in section D2 on page 31, and in section D2.1 on page 32.

- **EPA:** Need to emphasize measurement of functionality as well as strictly presence in the wetlands verification protocol.
 - **Response:** As noted above and in the Nonpoint Source QAPP, New York has not fully developed verification procedures for wetland restoration, but may in the future.

EPA RESPONSE: Please add text in the main section of New York’s final revised BMP verification program plan providing this explanation.

NY Response 3/4/16: This information is now provided in the Nonpoint Source QAPP in section A4.1 on page 10. Additional details are provided in section A4.2 on page, in section A5.3 on page 15, in section A6 on page 16, in section A9.1 on page 19, in section D2 on page 31, and in section D2.1 on page 32.

- **EPA:** The QAPP is somewhat inconsistent. It states on Page 16 that “Verification for BMPs collected by USC from other source sectors is not currently developed. Though wetlands are reported, they result in no functional change or load reduction triggering verification.” However, it also states on P11 that wetland data is entered manually into the online tool and later submitted via NEIEN. Page 5 of the Statistical sampling appendix indicates that wetlands will be verified at a rate of 5% annually.
 - **Response:** New York will make changes to a future version of our Nonpoint Source QAPP to improve clarity and consistency.

EPA RESPONSE: Please make the needed changes to text in New York’s final revised BMP verification program plan to address this comment.

NY Response 3/4/16: See responses above for description of changes made to the Nonpoint Source QAPP related to wetlands.