EPA's Conditional Approval of Virginia's
Revised Draft BMP Verification Program Plans
January 26, 2016

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

Virginia has outlined a very solid verification framework, but needs to provide more documentation and links to existing procedures to provide full transparency and public confidence. Virginia is recommending a statistical sampling based approach to verification of agricultural practices which relies on a range of percent samplings based on different categories of BMPs—that approach has been reviewed and supported by statistical survey design experts, but the documentation of the underlying rationale is still limited and raises more questions than it answers. Virginia needs to provide more detailed descriptions of its actual BMP verification protocols throughout the text and provide URL links to the written protocols for the reader to directly access them. When using a statistical sampling based verification protocol, Virginia needs to clearly document how they plan to translate the findings from the statistical survey into the actual numbers and geographical distribution of practices to be reported for crediting through the Partnership's annual progress runs. On January 7, 2016 Virginia provided EPA with seven pages of detailed responses to the major comments EPA shared with Virginia on December 18, 2015, enabling EPA to conditionally approve Virginia's draft revised BMP verification program plan.

Thanks for investing the time to develop these responses to the major comments which EPA shared with Virginia. Below, embedded below each of Virginia's responses you will find EPA's responses to Virginia's responses. If Virginia fully responses to each of EPA's below responses and provides for the requested level of documentation within a final revised BMP verification program plan, then EPA will be positioned to fully approve Virginia'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 Virginia's final revised BMP verification program plan prior to EPA and Virginia working together on the forthcoming award of Virginia's 2016 Chesapeake Bay Implementation Grant and Chesapeake Bay Regulatory and Accountability Grant.

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

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

Overall
- To really understand what is being recommended within Virginia's revised draft verification plan, the reader needs to go out to a host of other documents cited in document. Virginia needs to pull out the relevant documentation and include that text within their program plan.
  - **This comment contradicts the verification guidance on page 37 where jurisdictions are encouraged to provide URLs to related documents or attach copies.**
  - **Please provide the specifics of what content you would like us to excerpt from the cited documents. We will work to incorporate that information in the next iteration of the document.**

EPA RESPONSE: Virginia followed the guidance, but took it so far as to limit the text to the point where the reader was not getting sufficient details for general understanding. Recommend reading pages 21-25 in *Maryland's Best Management Practice Verification Protocols* dated January 2016 for a solid example of providing enough text in the main document for a reader to follow and understand the state's verification protocols. URL links are embedded directly throughout the text directing the reader to specific documents, checklists, manuals, etc. for more details. This is the balance between summary text and links to the detailed source documentation that EPA is asking Virginia to work towards.

Action: Tried to expand narratives surrounding current provided links throughout the document. I was only able to find a few that did not have an explanation.

- Very limited references within the main text and almost not URL links to documents providing more detailed documentation.
  - **Contradicts the previous comment that says a host of other documents are cited.**
  - **The table on page 11 of the Plan provides links to the programs or regulations that drive the implementation of the BMPs by the reporting sources. The table on page 24 provides links to the currently available quality assurance documents for each reporting source's BMP implementation programs. To avoid confusion, the current DCR QAPP link (http://www.chesapeakebay.net/channel_files/18593/vadcr_qapp-agbmp_data_jan2015_2.pdf) was not included because updates are needed to align it with this Plan. The DCR QAPP will be updated and the link activated in the next iteration of the plan.**

- **Please provide specifics on where you want us to incorporate additional references, what documents you want us to link to, and any excerpts you want incorporated into the Verification Program Plan. We will work to incorporate that information in the next iteration of the document.**

EPA RESPONSE: EPA is asking Virginia to embed URL links to <u>specific</u> documents, manuals, checklists within the relevant sections of text. For example, one URL links in the Table on page 11 sends the reader to links to "Virginia Stormwater Clearinghouse" and the other 'urban stormwater' link send the reader to a web page describing Municipal Separate Storm Sewer System (MS4) Permits. In both cases, the reader has no idea what she or he is supposed to find here related to verification of urban stormwater BMPs without supporting text. As a real working example of the documentation expectations, please look at the Maryland BMP Verification Program Plan as referenced in the above response to comment.

Action: Tried to add additional links throughout the narrative and tables and to ensure narratives describing the links were clear.

- Appendix 3 was helpful; however, this table did not document answers to all the Panel's evaluation form questions as well as to all the comments provided to Virginia.
    - **Appendix 3 is derived directly from Table 8 on page 34 of the Verification Guidance. It was not intended to answer every question about verification, rather as a tool to organize the documentation of verification protocol choices for the preferred groupings of BMPs covered by common verification protocols. The answers to the Evaluation Form questions and changes based on the comments from the Review Panel, Bay Program Sector Coordinators and EPA Region 3 are incorporated into the body of the Verification Program Plan.**
    - **Please provide specific instances of questions/comments you feel have not been adequately addressed and we will work with you to address the comments and where necessary, incorporate that information in the next iteration of the document.**

EPA RESPONSE: Within the BMP Verification Review Panel's *August 7, 2015 Initial Feedback on Jurisdictions' Draft BMP Verification Program Plans*, they included a listing of the sector specific questions from their evaluation forms the Panel used in review each jurisdiction's June 2015 draft program plan. Between the text, the URL links to more detailed protocols and documentation, and Appendix 3, readers should be able to get answers to all these questions.

As requested, here's an example of the Panel's evaluation questions for which the answers can't be found in the text nor Appendix 3 for riparian forest buffers:

"Are the frequency of site-checks consistent with the following recommendation from the sector guidance: Two visits within the first 4 years, spot-checked between

years 5-10, and spot checked between years 10-15 to determine contract continuation? If not, are they sufficient to ensure scientific rigor? Are CREP partners involved in the reenrollment process?"

Action: The Panel's evaluation questions for each sector, with Virginia's answers, are included as a new appendix in the Verification Program Plan.

- The protocols listed in Appendix 3 refer to other programs where specific requirements and procedures are likely included. However, links to all these other program documents were not provided.
    - **The Table on page 24 of the Plan provides links to verification documents that exist (when links are available) as well as identifying were additional documentation will be developed over time. Page 26 of the Verification Plan recognizes *"the development of Verification Protocols is intended to be an iterative and adaptive process."* This is consistent with the Verification Principles and guidance.**
    - **Page 23 of the Plan documents our commitment to work with data providers over the coming few years to document and improve, as necessary, their QA procedures. We will incorporate links to SOPs/QAPPs for data providers, as they are developed, in future iterations of the document.**

    EPA RESPONSE: The table on page 24 provides the reader with only a total of five links, three of which direct the reader to the same web page. EPA understands and signed on to the notion that "*the development of Verification Protocols is intended to be an iterative and adaptive process"*, but that should not prevent providing links to the currently available documentation which describe existing inspection and verification protocols.

Action: Added more links based on input from data providing programs.

- Training requirements for inspectors were not clearly documented throughout the verification program plan.
    - **The intent of this DEQ Verification Plan is to establish the standards for BMP verification for all data providers. Each data provider, internal and external, may follow somewhat different procedures and have different training for their inspectors. Section A8 on page 14 of the Plan attempts to explain this complexity and lays out a process for documenting these potentially diverse training procedures through time.**

    EPA RESPONSE: EPA understands and agrees with the complexity of the diversity of training procedures for <u>all</u> data providers. However, there are clearly existing training and certification programs in place and operational for your core data providers—e.g., conservation district personnel, MS4 inspectors. Please see pages 7-9 in New York's Agricultural BMP quality assurance project plan for an excellent example of the

documentation on training requirements being sought. Also see pages 35-36 in *Maryland's Best Management Practice Verification Protocols* dated January 2016.

Action: Because training/certification procedures vary by sector, we included that information in the sector specific sections of D2. A statement of such and link to D2 was added to section A8.

- Verification procedures for BMPs owned or operated by Federal agencies, facilities and landowners were essentially absent from Virginia's revised draft BMP verification program plan.
    - **The Tables on pages 11, 19 and 24 of the Plan specifically list Federal Facilities as potential sources of data. As such, the data are expected to satisfy the verification standards documented in the Plan.**
    - **Page 23 of the Plan documents our commitment to work with data providers over the coming few years to document and improve, as necessary, their QA procedures. We will incorporate links to federal facility SOPs, as they are developed, in future iterations of the document.**

    EPA RESPONSE: Thanks for pointing to documentation and reference to those pages and tables. The above comment has been addressed for this version of Virginia's program plan.

Action: No further action required.

Agriculture
- In response to comments about sampling percentages below 5 percent, Virginia provided more documentation and underlying rationale on pages 28-30 and in appendices 5 and 6 on the basis of their selection of the percentages. However, they still did not provide sufficient rationale and background information to fully address the comments.
    - **Please provide specifics of what additional rationale and background information would be sufficient to address the comments and we will work with you to address the comments and where necessary, incorporate that information in the next iteration of the document.**

    EPA RESPONSE: EPA, reflecting comments from the Panel, source sector workgroup coordinators, EPA reviewers, and external NGO reviewers, recommends that Virginia systematically walk your reader through the logic of your decision making process, explaining your rationale for your incremental decisions along the way. The independent statistical design review team gave Virginia two thumbs up on the statistics, but they did not make judgments on the assumptions. That's why Virginia needs to talk the reader through those assumptions and underlining the rationale. EPA is not asking for lengthy documentation, just a stepwise narrative along the following lines:

    - Virginia decided on the data groupings listed in Appendix 5 for the following reasons….

- Even though those data groupings resultant in combinations of very unique BMPS, Virginia believes this is appropriate because….
- Virginia came to the determination that the specific groups of BMPs were considered a low risk of failure based on the following data and programmatic experiences….
- The source of the 'number of practices' listed in Appendix 5 were the following [give web site address]. The public can only access aggregated sets of those practices through [give URL link to web site] due to privacy considerations spelled out in the federal legislation.
- For each of the response distributions, here's exactly how Virginia arrived at each set of assumed pass/fail percentages…..
- The sample size and confidence interval calculations were developed using the following website [URL link]. Below is a set of sample calculations working exactly how sample size and confidence intervals were derived….
- Every year once this random sampling is accomplished, here's exactly how Virginia takes those sampling results for each grouping of BMPs and translates those results into the number, acreage, and mileage of BMPs reported by county to the Chesapeake Bay Program Office….

Action: The grouping scheme and associated sampling design was modified to be more conservative while still aligning with the historic spot check identified failure rates. Additional narrative was added in section D2 under Agriculture.

- The sources of the data cited in Appendices 5 and 6 need to be documented and the public needs to be provided full access to those data.
  - **The only data in Appendix 5 is the number of practices, which originated from the DCR cost-share tracking database. It should be noted that these numbers represent only one of the potential data providers in the agricultural sector, and the numbers are not static; this was a snapshot in time. More BMPs are installed every day and every day other BMPs drop out of the contractual period thereby changing their verification group. The purpose of Appendix 5 is to demonstrate how BMPs are grouped, give a sense for the numbers of practices in each data group and to establish the method for identifying the necessary sample size to achieve a 90% confidence interval with a $\pm 5\%$ margin of error. Ultimately, these numbers should be the numbers of BMPs reported in NEIEN for a progress run (depending on Partnership decisions described in the response to the next comment). That would make the data publicly available and everyone could see what was reported, where the verification discounts were applied and what was credited in the model.**
  - **The data in Appendix 6 is attributed in the title of the appendix: *"from DCR Spot Checks (1998-2015)."* The table provides the data to everyone. What more access are you looking for?**

- o **We cannot provide the public access to the VACS database as it contains personally identifiable information and confidential data.**

  EPA RESPONSE: EPA understands the privacy concerns, but the Partnership also agreed to transparency as a guiding principle. EPA recommends Virginia make an aggregated version of the data used in Appendix 5 publically accessible on the web, explaining in simple terms to your readers why their can't have direct access to individual producers' information and data.

  The above text is exactly the type of additional documentation you should be providing to your readers—clear explanations of what lead you to the recommended verification approach in the current version of the quality assurance plan, what new data is coming forth, how Virginia will continue to consider and factor in that new data over time, and how Virginia will continue to adapt to the new data and adjust its sampling protocols as a result.

  In terms of the data in Appendix 6, EPA recommends Virginia make an aggregated version of the data used in Appendix 5 publically accessible on the web, and providing the readers with a description of VA DCR's spot check and URL links to the specific on-farm procedures and checklists following in carrying out each spot check. The objective here is to be fully transparent in how you arrived at the sampling procedures and how those results translate into numbers and acreages and miles of BMPs reported for credited. Make no assumptions about your readers' prior knowledge or understanding.

Action: A spreadsheet with the applicable tables and source data will be posted to the DEQ website with the final verification plan. Additional narrative incorporating the text above and focusing on target sample confidence and margin of error rather than the snapshot of the current DCR universe of practices added as suggested.

- When using a statistical sampling based verification protocol, Virginia needs to clearly document 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.
  - o **In general, our approach is documented in Appendix 3,** *"Sample failure rate will be applied to group population to remove practices from the reporting record;"* **and in the body of the Plan on page 30,** *"the information from the statistical sample based follow-up checks will be used to remove practices from the reporting record based on identified failure/abandonment rates in each BMP verification group."*
  - o **The partnership needs to decide these issues. Does the partnership want actual implementation reported to NEIEN and then for EPA to apply the verification discounts, either as supplied by the jurisdictions or imposed by EPA, as is proposed for Nutrient Management? Or does the partnership**

prefer that the jurisdictions apply the discounts prior to reporting through NEIEN.

o **Fortunately, the partnership has until 2018 to figure this out and ensure NEIEN is ready to support the decision. We will be happy to incorporate such decisions in future iterations of the document.**

EPA RESPONSE: The current text cited in the above response—"Sample failure rate will be applied to group population to remove practices from the reporting record"—does not tell the reader, or this federal oversight agency, how Virginia will translate the sampling results into county by county counts of number, acreage and mileage of BMPs reported for crediting. EPA is simply asking Virginia to describe in more narrative detail the process Virginia will be following and give an actual example of the calculation.

The Partnership does need to make decisions about what the expectations are for what exactly should be reported through NEIEN, but Virginia is responsible for spelling out its specific procedures for how sampling results are applied to the total population of BMPs. Virginia's quality assurance plans needs to spell out those procedures in the revised final program plan—separately, the Watershed Technical Workgroup will be asked to take on the questions regarding exactly what needs to be reported through NEIEN.

Action: As requested, the narrative on this topic was expanded to describe the approach we think is best. Partnership discussions and a decision on the topic are still needed.

Forestry
- Does not address verification of urban forestry practices—urban buffers, urban tree canopy, and urban tree plantings. Virginia Department of Forestry is working on an urban forestry program and actively encourages and trains local forest partners, but this program was not included in the protocol.
  o **The Verification Framework guidance gives jurisdictions flexibility in designing their Verification Programs, page 7 says *"All the Bay Program partners recognize the importance of maintaining flexibility and not being overly prescriptive… each jurisdiction can take a different path."* Virginia has elected to group BMPs by sector, delivery program and risk rather than the default sector breakout used in the guidance. This does not mean we have not addressed forestry practices, just that we have grouped them differently. This approach is documented on page 31 of the Plan. Urban Buffers and Urban Tree Planting are included in the Urban sector protocols. Tree canopy, on the other hand, is not currently a BMP in the Bay models. When/if Tree Canopy is approved, it will be added to the Verification Protocol.**

  EPA RESPONSE: EPA agrees that Virginia has the flexibility in designing their verification program including the grouping. However, urban buffers and urban tree planting verification protocols are not spelled out in Appendix 3, Table 2 nor in the text

on page 31. No URL links are provided to direct the reader towards more detailed documentation on such protocols.

Action: We expanded the narrative for the forestry sector in section D2 to describe existing urban forestry efforts.

Stormwater
- Virginia needs to provide the reader with a more in-depth narrative descriptions of, and URL links to where the reader can find Virginia's more detailed stormwater inspection procedures and manuals.
  - **The Table on page 24 of the Plan provides links to verification documents that exist (when link is available) as well as identifying were additional documentation will be developed over time. Page 26 of the Verification Plan recognizes** *"the development of Verification Protocols is intended to be an iterative and adaptive process."* **This is consistent with the Verification Principles and guidance.**
  - **Page 23 of the Plan documents our commitment to work with data providers over the coming few years to document and improve, as necessary, their QA procedures. We will incorporate links to SOPs/QAPPs, as they are developed, in future iterations of the document.**

    EPA RESPONSE: EPA addressed very similar comments previously.

Action: Additional links and narrative added in D2 under Urban.

- Need more documentation of verification procedures directed towards non-regulated stormwater.
  - **On page 35 we describe the process for verification in the non-regulated (Non-MS4, non-Bay Act) existing urban lands.** *"BMPs installed with no regulatory requirement represent a unique challenge. In the non-regulated urban sector BMP reporting is voluntary, as is BMP inspection. The protocol takes a practical approach, attempting to notify the BMP reporting source of the need for re-inspections as BMPs approach the end of their credit duration. The notification will recommend a re-inspection to verify continued performance and provide the procedures for reporting data documenting such re-inspections. Inspection updates provided by reporting sources will be used to update data records and extend credit life. If no updates are received, credit durations will require removal of the record from the reporting system."*
  - **With the addition of new programs such as SLAF and VCAP that may provide cost-share for BMP implementation in the non-regulated urban sector, we will have a new means by which to require maintenance and reinspection for those funded practices. We will incorporate information regarding these new programs in the next iteration of the document.**

EPA RESPONSE: The current text does not describe the actual verification procedures directed towards non-regulated stormwater. EPA asks Virginia to provide more specific documentation on your new programs—SLAF and VCAP—in Virginia's final revised BMP verification program plan and provide directly URL links to the specific stormwater inspection manuals and protocols.

Action: We have a plan to develop BMP specific maintenance and inspections procedures for inclusion in future iterations of the plan. We did expand narrative describing the new SLAF and VCAP programs, but neither has produced any reportable implementation to date.

- Virginia still needs to address comments raised about the statement "Many of the BMPs implemented in the urban sector are required by permits or regulatory programs… As such, this class of BMPs is expected to be maintained in perpetuity and no sunsets will apply." More documentation is needed on the protocols for follow-up inspections and procedures for addressing non-functioning practices. The current documentation requires the reader to make a number of assumptions along the way.
  - **The phrase *"and no sunsets will apply"* was removed from the body of the Plan. In addition to removing the phrase, additional content was added to page 34 of the Plan to address this comment. The phrase was inadvertently left in Appendix 3. This will be corrected in the next iteration of the document.**

EPA RESPONSE: EPA acknowledges the changes made to the text starting on page 33 and asks Virginia to remove that phrase for Appendix 3 as committed in Virginia's final revised BMP verification program plan.

Action: Edited Appendix 3 to remove "and no sunsets will apply."

<u>Streams</u>
- Virginia needs to provide the reader with a more in-depth narrative description of, and URL links to where the reader can find Virginia's more detailed stream restoration verification protocols.
  - **The Verification Framework guidance gives jurisdictions flexibility in designing their Verification Programs, page 7 says *"All the Bay Program partners recognize the importance of maintaining flexibility and not being overly prescriptive… each jurisdiction can take a different path."* Virginia has elected to group BMPs by sector, delivery program and risk rather than the default sector breakout used in the guidance. This does not mean we have not addressed verification of stream restoration, just that we have grouped it within the Urban or Agricultural Sectors that drive the implementation of the practice. Urban Stream restoration is included in the Urban sector protocols. Non-Urban Stream restoration is included in the Agricultural sector protocols.**

EPA RESPONSE: Putting aside where these practices are located in Virginia's plan and how they are grouped, the plan is still missing "a more in-depth narrative description of, and URL links to where the reader can find Virginia's more detailed stream restoration verification protocols." EPA recommends Virginia review Pennsylvania's description of their stream restoration verification protocols (see page 96-99) as well as Maryland's stream restoration verification protocols on pages 49-51. In less than 3 pages, both states provided detailed information on verification of stream restoration and links to specific checklists and manuals, with the readers coming away a solid understanding about those states' verification procedures without getting into the engineering details (which are a click away for the user).

Action: Virginia will develop specific procedures for maintenance and inspection of all BMPs by the end of 2017. The procedures for stream restoration and wetlands BMPs will be prioritized for development early in the process. Once complete, these BMP specific procedures will be posted to the DEQ website and links to the documents added to this Verification Plan.

- The document states that follow-up inspections will consider both continued presence of the system and their functions but it does not state how it will review/measure for functions.
    - **Stream restoration projects may be reported by many different sources; local governments, federal facilities, NGOs, state or federal agricultural cost-share programs, etc. Each of these reporting sources will have their own procedures for inspection of these practices including the practice's function to control nutrient and sediment loads. DEQ will ensure each reporting source meets the verification standards described in the Plan. Page 23 of the Plan documents our commitment to work with data providers over the coming few years to document and improve, as necessary, their QA procedures. We will incorporate links to SOPs/QAPPs, as they are developed, in future iterations of the document.**

    EPA RESPONSE: Given stream restoration projects require state and federal permitting and those permit requirement generally spell out requirements for inspection and monitoring, Virginia is in a position to be able to do what most of the other jurisdictions has done and spell out the existing set of requirements and the state's current expectations for inspection and monitoring. This is not a case where Virginia is waiting on others to develop new protocols and procedures—the Corps of Engineers, U.S. Fish and Wildlife and even NRCS have established inspection and monitoring procedures and checklists which are referenced in the other states' BMP verification program plans.

Action: Additional narrative was added in section D2 under Stream restoration and wetlands.

- Functionally was referenced in the text, but not link to specific protocols were included.
    - **If this comment is meaningfully different than the previous one, please clarify. Otherwise, the same response applies.**

EPA RESPONSE: If you read the Panel's and the Stream Restoration Workgroup coordinator's comments carefully, they are asking each jurisdiction to ensure verification of stream restoration is not based strictly on the visible presence of a restored stream system, but on specific measures that get at a change in the function of the stream ecosystem which is contributing to the reduction in sediment and nutrient loads. Virginia's text mentions functionally, but there is no connection made from that word choice to a documented specific set of stream restoration inspection and monitoring protocols which provide for measures of functionality, not just presence.

Action: We will consider this as we develop the BMP specific maintenance and inspection procedures.

- Stream restoration verification protocols are not documented within Appendix 3.
    - **The Verification Framework guidance gives jurisdictions flexibility in designing their Verification Programs, page 7 says *"All the Bay Program partners recognize the importance of maintaining flexibility and not being overly prescriptive… each jurisdiction can take a different path."* Virginia has elected to group BMPs by sector, delivery program and risk rather than the default sector breakout used in the guidance. This does not mean we have not addressed verification of stream restoration, just that we have grouped it within the Urban or Agricultural Sectors that drive the implementation of the practice. Urban Stream restoration is included in the Urban sector protocols. Non-Urban Stream restoration is included in the Agricultural sector protocols.**

    EPA RESPONSE: Again, putting aside where these practices are located in Virginia's plan and how they are grouped, the text references Appendix 3 as the source of descriptions about each grouped set of practices' verification protocols. However, stream restoration is not listed or mentioned in Appendix 3, tables 1 or 2.

Action: Appendix 4, Table 1 lists the non-urban stream restoration practice along with the 2 verification groups under which it may be reported. Appendix 4, Table 2 lists the urban stream restoration practice along with the 4 verification groups under which it may be reported. Appendix 3 then provides the verification protocols for each of the potential groups. Additional narrative was added to section D2 to further clarify.

Wastewater
- Very minimal narrative descriptions of wastewater treatment discharge verification protocols, limited descriptions in Appendix 3, and no links to available, more detailed protocols and procedures.
    - **This source is not simulated in the Bay Models as a BMP and was not the focus of the studies that were the driver for the development of the Verification Framework. Furthermore, these sources are managed under**

Section 402 of the Clean Water Act which established the National Pollutant Discharge Elimination System (NPDES) program to limit pollutant discharges into streams, rivers, and bays. DEQ issues permits, with federal (EPA) oversight, for these dischargers. As stated in the Plan on page 36, data is collected in accordance with the appropriate permits and follows the verification procedures established within those program regulations. A link to these regulations is provided in the table on page 24 of the Plan. The Regulations include a requirement that all monitoring be conducted according to test procedures approved under 40 CFR Part 136 or alternative EPA approved methods.

EPA RESPONSE: Virginia's draft revised plan provides the reader with three simple sentences describing verification procedures carried out in the oversight of wastewater treatment facilities. Appendix 3, table 3 provides several more sentences. There are no references or links within the text or the Appendix to direct the reader to the significant documentation that exists for Virginia's NPDES program. The link in the table on page 24 takes the reader to the Administrative code for permitting, not to standard operative procedures for self-reporting by the facilities and independent on-site visits and compliance sampling by DEQ. New York's point source data quality assurance project plan provides an excellent example of in-depth documentation provided by the other jurisdictions, including links to established procedures and protocols, all this within just several pages.

Action: Additional narrative was added to section D2 under Wastewater, CSO, Onsite, and Extractive

- Very minimal narrative descriptions of CSO verification protocols, limited descriptions in Appendix 3, and no links to available, more detailed protocols and procedures.
    - **This source is not simulated in the Bay Models as a BMP and was not the focus of the studies that were the driver for the development of the Verification Framework. Furthermore, these sources are managed under Section 402 of the Clean Water Act which established the National Pollutant Discharge Elimination System (NPDES) program to limit pollutant discharges into streams, rivers, and bays. DEQ issues permits, with federal (EPA) oversight, for these dischargers (3 areas totaling about 0.15% of Virginia's Bay watershed acres). As stated in the Plan on page 37, implementation and verification of actions to reduce the impact of CSOs follows the CSO Long Term Control Plans and applicable regulations. The table on page 24 of the Plan will be updated to add "and CSOs" after Wastewater in the next iteration of the plan. The existing link to the regulations is also applicable to CSOs. The Regulations include a requirement that all monitoring be conducted according to test procedures approved under 40 CFR Part 136 or alternative EPA approved methods.**

EPA RESPONSE: From a public transparency perspective, EPA is simply asking for sufficient documentation to inform an average reader about the programmatic steps and procedures followed by Virginia DEQ and CSO communities in ensuring the loads from these systems are verified over time. From the bottom of page 13 to the top of page 14, New York provides a comprehensive, informative, yet concise description of their CSO verification procedures. The reader comes away with a clear sense of how the state of New York ensures it knows what's being reported for all its COs from a loading and treatment perspective. Virginia cannot communicate that understanding in just three sentences on page 37 and a single link to an NPDES permitting administrative code web site in the table on page 24.

Action: Additional narrative was added to section D2 under Wastewater, CSO, Onsite, and Extractive

- Very minimal narrative descriptions of septic system/onsite treatment system verification protocols, limited descriptions in Appendix 3, and no links to available, more detailed protocols and procedures.
    - **A link to the onsite regulations that apply to all alternative (nitrogen reducing) onsite systems is provided on Page 37 of the Plan. These regulations require post construction sampling and ongoing inspection/maintenance of the systems at least annually (more frequent for larger systems). A link to these regulations will be added to the table on Page 24 of the Plan in the next iteration.**

EPA RESPONSE: EPA's response is exactly the same here as it was for CSOs and wastewater treatment facilities. Starting on page 130, Delaware provides excellent documentation on their program for verifying on-site treatment systems within several pages. The exact set of information is available for Virginia as it is for Delaware, it just needs to be synthesized and incorporated into Virginia's final revised BMP verification program plan.

Action: Additional narrative was added in section D2 under Wastewater, CSO, Onsite, and Extractive
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Wetlands
- There is no documentation of the wetland verification protocols—link to the VA DCR cost share manual is the only documentation provided.
    - **The Verification Framework guidance gives jurisdictions flexibility in designing their Verification Programs, page 7 says *"All the Bay Program partners recognize the importance of maintaining flexibility and not being overly prescriptive… each jurisdiction can take a different path."* Virginia has elected to group BMPs by sector, delivery program and risk rather than the default sector breakout used in the guidance. This does not mean we have**

not addressed wetlands practices, just that we have grouped them within the Urban or Agricultural Sectors.

EPA RESPONSE: Again, putting aside where these practices are located in Virginia's plan and how they are grouped, the text only references the VA DCR cost share manual, not even Appendix 3. The two references to wetland practices within the VA DCR cost share manual were less than two pages in length and focused principally on tax credits. The BMP verification relevant text was as follows:

"3. This practice is subject to NRCS Standards; 342 Critical Area Stabilization, 356 Dike, 587 Structure for Water Control, 657 Wetland Restoration, 659 Wetland Enhancement, and 644 Wetland Wildlife Habitat Management."

"4. All practice components implemented must be maintained for a minimum of 10 years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the year of implementation. By accepting either a cost-share payment or a state tax credit for this practice the participant agrees to maintain all practice components for the specified lifespan. This practice is subject to spot check by the SWCD throughout the lifespan of the practice and failure to maintain the practice may result in reimbursement of cost share and/or tax credits."

There is no mention of Virginia's inspection frequencies or verification methodologies.

Action: Additional narrative added to section D2 under Stream Restoration and Wetlands.

- Virginia needs to provide a more in-depth narrative description of how they plan to carry out verification and provide links to more detailed documentation on field verification protocols to be followed.
  - **This information is contained within the protocols for the Urban and Agricultural Sectors based on the driving implementation program. This is documented in the Plan on page 33.**

EPA RESPONSE: EPA does not see what these 'protocols based on the driving implementation program' documented within Virginia's program plan.

Using the above comment response as an example, Virginia is making huge leaps of faith in the understanding of the readers of this document in asking them to make the connections that Virginia believes are in the document between several lines of text on a single page to a table listing a host of URLs then to the respective table and BMP grouping in Appendix 3. EPA's response applies to this above comment and the majority of the comments listed here—such a limited level of documentation does not achieve the Partnership's BMP verification principles, starting with public confidence.

Action: Virginia's Verification Program is designed to align with the State Agency programs that drive the implementation of the various BMPs. This is because those same agencies are responsible for the verification of the practices implemented under their programs. BMPs are grouped accordingly. That is what we meant when saying "based on the driving implementation program." To highlight an example: Appendix 4, Table 1 lists the agricultural wetland restoration practice along with the 2 verification groups under which it may be reported. Appendix 3 then provides the verification protocols for each of the potential groups. Additional narrative was added to section D2 to further clarify.

Virginia will develop specific procedures for maintenance and inspection of all BMPs by the end of 2017. The procedures for stream restoration and wetlands BMPs will be prioritized for development early in the process. Once complete, these BMP specific field verification procedures will be posted to the DEQ website and links to the documents added to this Verification Plan.