SOIL EROSION AND SEDIMENT CONTROL MANUAL FOR AGRICULTURAL OPERATIONS

(DEP ID: 383-4200-002)

COMMENT RESPONSE DOCUMENT

October 5, 2019

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Pennsylvania Department of Environmental Protection
Bureau of Clean Water

LIST OF COMMENTATORS

The names of individuals who submitted comments to the Department are identified below. The Department has recorded each comment in this document and identified the commenter(s) by number, corresponding to the list below.

1. Ronald Furlan
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INTRODUCTION

The Department of Environmental Protection (Department) published notice of the availability of a draft Soil Erosion and Sediment Control Manual for Agricultural Operations in the *Pennsylvania Bulletin* on January 5, 2019 [49 Pa.B. 74]. A 60-day comment period was provided, and interested parties were directed to submit comments to the Department's eComment system. The comment period ended on March 6, 2019. The Department received comments and questions from 5 different individuals and organizations during the comment period. The purpose of this document is to present the Department's responses to these comments and answer all questions posed.

COMMENTS AND RESPONSES

The number associated with each commenter is identified in parentheses following the comment. Comments are organized by topics.

Definition Section

1. **Comment:** Definitions used in this manual should not be paraphrased. The law or regulatory definition should be used and if there is clarification (as noted on the policy definition page) can be an added paragraph. For example, Intermittent Stream definition is not as that in law or regulation but appears to attempt to paraphrase the real definition. **(1)**

Response: The heading for this section has been changed to "Descriptions of Terms Used in This Manual" to avoid any confusion or notion that they supersede the Regulatory Definitions.

A notation has been added to the beginning of this section stating: "The below terms are used throughout this manual. Some of these terms have definitions set forth in 25 Pa. Code § 102.1 (the "Regulatory Definitions"), an unofficial copy of which is included in Appendix A. The descriptions below are intended to assist in understanding how the Department interprets and applies the Regulatory Definitions in the context of this manual. These descriptions do not modify, replace or supersede the Regulatory Definitions, and are provided for illustrative purposes only. In the event of a perceived discrepancy between the descriptions set forth below and the Regulatory Definitions, the Regulatory Definitions control."

2. **Comment:** CBF recommends clarification of these definitions: The list of crops in the definition of "Agricultural operation" should include, but not be limited to, those listed. It is unclear whether hemp, hops, switchgrass and others are covered by this Manual. **(4)**

Response: The crops mentioned in the description of "agricultural operation" were not meant to be an all-inclusive list, as it would be incredibly difficult to capture every possible crop variety. The language was changed in this definition to state "Crops include, but are not limited to,".

3. **Comment:** CBF recommends clarification of these definitions: Animal Heavy Use Areas (AHUAs) and Animal Concentration Areas (ACAs): "The term does not include entrances, pathways, and walkways between areas where animals are housed or kept in concentration."

However, these areas would be subject to heavy and/or concentrated animal traffic, so erosion and sediment control measures should be required. **(4)**

Response: Items (i) and (ii) of this description are identical to the definition of animal heavy use area (AHUA) in 25 Pa. Code § 102.1, which includes the portion referenced in your comment. These areas are not considered AHUAs; however, they should be included in the overall evaluation of the agricultural operation, i.e., a pathway is located next to a pond and stormwater washes sediment into the pond during rain events. This is stated in Step 2 of Part 1.

4. **Comment:** CBF recommends clarification of these definitions: Management BMPs: "Any BMP, as defined above, that is a practice or procedural change on the operation. Examples include cover cropping, contour farming, stripcropping, and conservation tillage." "Conservation tillage" should be defined or described as a broad category of methods that minimally disturb the soil, such as no-till cultivation, striptillage, or vertical tillage to reduce confusion. **(4)**

Response: The description of management Best Management Practices (BMPs) has been revised to clarify what practices constitute "conservation tillage".

5. **Comment:** CBF recommends clarification of these definitions: "Structural/constructed BMPs" are defined, but the term "structural BMPs" is used throughout the Manual, except for one instance on page 13 where "structural/constructed BMPs" is used. Consistent use of terms would be helpful. **(4)**

Response: This description was entitled "structural/constructed BMPs" to clarify that these terms are often used interchangeably. The description section was created to further explain key concepts and eliminate any confusion regarding terminology before the reader begins delving into one of the main subsequent sections of the guidance. The heading of "structural/constructed BMPs" has been revised to "structural BMPs" and the description revised to state that they are BMPs that are physically installed or constructed.

6. **Comment:** CBF recommends clarification of these definitions: Several types of erosion are listed in the definitions, and the differentiation between them is confusing. All are concerns that must be addressed in an Ag E&S Plan, so the need for this differentiation is unclear.

- Rills are defined as "typically less than 4 inches deep" and gullies are "usually around 1 foot or greater in depth."
- Ephemeral gullies are described as larger than a rill but smaller than a gully, and usually destroyed by tillage. A drainage line between 4 and 12 inches that persists through tillage may wrongly be interpreted as not a concern.
- "Sheet/interill erosion" is listed in the definitions section, but "interill" appears nowhere else in the Manual. Sheet and rill erosion are mentioned as concerns to be addressed in an Ag E&S Plan. It is unclear why the definitions do not match the rest of the Manual. **(4)**

Response: Any individual who chooses to write an Ag E&S Plan will need to understand the various types of erosion. These descriptions are to help with this process. The four types of

erosion noted in this section have been moved as subheadings of "erosion" to help clarify this, and "interrill" was listed here because this term is becoming increasingly common and may be used interchangeably with "sheet". The heading of "sheet/interrill erosion" has been revised to "sheet erosion", with a sentence explaining the correlation of the two terms.

Additionally, the description of "ephemeral gully erosion" was revised to state that they are usually, but not always, corrected by tillage.

7. **Comment:** CBF recommends clarification of these definitions: The definitions for "intermittent stream" and "perennial stream" in the draft Manual appear to be paraphrased from the definitions in 25 Pa. Code § 102.1. Although similar, they lack detail that may be needed for developing an E&S Plan; thus, they should be made consistent. **(4)**

Response: These descriptions are to aid individuals in understanding the elements of an Ag E&S Plan, particularly those who may be confused or intimidated by the biota-based definitions and associated terminology of intermittent and perennial streams found in 25 Pa. Code § 102.1. These descriptions sufficiently describe the types of streams that need to be considered when developing an Ag E&S Plan.

Additionally, please see the response to comment #1 above.

Part 1 – Manual for Operators and Landowners

8. **Comment:** Page 5: The flow chart will be extremely helpful to determine who does and does not need an Ag E&S Plan. **(4)**

Response: Thank you for your comment.

9. **Comment:** Page 6: The list of conditions requiring an updated plan should include practices or conditions that contradict or are incompatible with the farm's Nutrient Management Plan or Manure Management Plan. **(4)**

Response: A bullet has been added to this list indicating that any inconsistency with the operation's Manure Management Plan (MMP) or Nutrient Management Plan (NMP) is cause for revision of the Ag E&S Plan.

10. **Comment:** Page 7: BMP adoption might increase if this question is added: "Would your farm benefit from increased water infiltration and retention if practices are established to improve soil health, and also reduce erosion?" **(4)**

Response: To highlight the requirement of BMPs for all agricultural operations, a page was added immediately after the first page in Part 1 (the flowchart). The page is entitled "Why Are All Agricultural Operations Required to Have BMPs?" and one of the bullets states that BMPs increase water infiltration and retention.

11. **Comment:** Page 8, Question 3: Are there signs that sediment is leaving crop fields and/or bare ground areas and reaching a surface water source (stream, waterway, lake, pond or open sinkhole)? We recommend using "reaching surface water" instead of "reaching a surface water source," because the former is a more inclusive term, while the latter could be interpreted to

exclude any surface water that is not considered a source for drinking water. Stormwater runoff, streambank erosion and sinkhole formation should be added to the list of conditions requiring a revised Ag E&S Plan. **(4)**

Response: The term "source" has been removed from the statement referenced in your comment.

Stormwater runoff not associated with AHUAs or agricultural plowing and tilling activities is not a reason that Ag E&S Plans would need revision. While streambank erosion and sinkhole formation are general concerns, their creation is not necessarily related to accelerated erosion associated with agricultural plowing and tilling activities or AHUAs. This list is not all-inclusive, and a sentence has been added to indicate this fact and that every operation has site-specific conditions to consider.

12. **Comment:** Page 9: PAOneStop could be listed as a resource for developing the necessary maps. **(4)**

Response: PAOneStop is listed as a potential source for Ag E&S Plan maps in the next section of Part 1, which provides more detail regarding mapping.

13. **Comment:** Page 9 - 2. BMPs to Minimize/Reduce Accelerated Erosion and Sedimentation: A verb seems to be missing from the beginning of this section, which makes the section difficult to understand. **(4)**

Response: This page is intended to summarize the required items of an Ag E&S Plan for agricultural operators/landowners. The formatting of this page has changed and the heading for BMP requirements now combines cropland, hayland, and pasture BMPs; fields along streams and rivers; and Animal Heavy Use Areas with the statement: "These three sections contain BMPs that will be used or are being used to minimize/reduce accelerated erosion and sedimentation."

14. **Comment:** Page 9 - 3. Map(s) of Owned and Rented Lands: Soil types, crop types, soil loss tolerance, and predicted annual soil loss should be identified on the maps. "Soil features" may not adequately cover all these items. In addition, maps should be provided for each phase of structural BMP construction, in addition to the planned final conditions and finalized maps within a limited period (e.g. 1 month) after construction completion. **(4)**

Response: The bullet stating "soil features" has been revised to "soil types" to alleviate potential confusion.

Crop types, soil loss tolerance, and predicted annual soil loss are not required to be shown on maps but are required as components of an Ag E&S Plan; these requirements are discussed in subsequent sections of Part 1.

Additionally, the Department does not require submission of maps for each phase of BMP construction.

15. **Comment:** Page 11 – BMPs to Minimize/Reduce Accelerated Erosion and Sedimentation: Paved areas and other impervious surfaces on the property should be considered on the Ag E&S plans because the placement of such areas can cause soil erosion. **(4)**

Response: 25 Pa. Code § 102.4(a)(2) requires BMPs for agricultural plowing and tilling activities and AHUAs as defined in 25 Pa. Code § 102.1. The impervious areas on an agricultural operation should be evaluated in conjunction with the agricultural plowing and tilling activities and AHUAs as appropriate, i.e. a barn is lacking gutters/downspouts which allows stormwater to wash sediment from the barnyard. There is not a requirement to specifically address paved and impervious surfaces in an Ag E&S Plan, as that is a stormwater management requirement and not an Ag E&S requirement.

16. **Comment:** Page 13: Language should be added stating that all BMPs in the plan must be implemented according to schedule. **(4)**

Response: To clarify this requirement, a bullet was added to a previous section in Part 1, which discusses BMPs and implementation schedules, stating that BMPs must be implemented according to the schedule in the plan. This statement was also added to Part 2.

17. **Comment:** Pages 14-15: It would be helpful to include illustrations of the described BMPs, along with information about how the practices provide additional benefits to the farm. For example, no-till cultivation reduces planting costs and reduces soil compaction. **(4)**

Response: The Department consulted with several workgroups throughout the development of this guidance, consisting of representatives from the State Conservation Commission, NRCS, Penn State Extension, county conservation districts, and the Agricultural Advisory Board, whose members include PA Farm Bureau, PA Farmers Union, PennAg Industries Association, legislative representatives, PA Department of Agriculture, and numerous agricultural producers throughout the state. These workgroups determined that adding illustrations would not be beneficial, as the hard copies of the guidance will be printed in black-and-white. Adding illustrations would also significantly add to the length of the document, which was not recommended. The Department is in the process of creating training modules to complement this guidance and anticipates incorporating illustrations in these trainings.

The lists of common BMPs found in Part 1 have been revised and a third column has been added to state the benefits of each BMP. It is also noted in this section of the manual that there may be other benefits of these BMPs in addition to what is provided.

18. **Comment:** Pages 14-15: The listing of BMPs could include additional information about how the practices might fit into a farm's long-term goals, to further increase adoption. For example, the description of cover crop establishment should emphasize some of the benefits such as reduced compaction, improved nutrient availability to other crops, and water infiltration and retention to provide resilience to extreme weather events. Forested riparian buffers and their benefits should also be included in the list. **(4)**

Response: Forested riparian buffers has been added the list of common BMPs. Also, please see the response to comment #17 above.

Part 2 – Manual for Plan Developers

19. **Comment:** Agriculturally-impaired streams have been overwhelmed by adjacent activities. By taking additional steps to reduce runoff in these areas, the stream has a better chance of recovering and at a faster pace. When the stream has responded sufficiently to lift the impairment designation, the additional restrictions no longer need to apply. In the meantime, local and downstream conditions will improve, further assisting the natural system to mitigate nutrient and sediment inputs.

To maximize the benefits of both local waters and downstream neighbors, the Commonwealth should maximize the opportunity of this guidance document to specifically address local stream impairments arising from agricultural activities. Specifically, Item #2 in Part 2 – Manual for Plan Developers, should be expanded so that fields within agriculturally-impaired watersheds have additional expectations, such as a 60 percent residue coverage, or 30 percent residue coverage plus a 35' vegetative buffer. **(3)**

Response: 25 Pa. Code § 102.(4)(a) does not specify residue coverage percentages or buffers for streams impaired by agricultural activities and, as a result, the Department has not required them in this guidance. The Department has taken your comment into account and added examples of streamside BMPs to this guidance to make agricultural operations aware of the value they can add to improve impaired waters of this Commonwealth.

20. **Comment:** Page 16, Ag E&S Plan Elements, 1 and Page 17, Ag E&S Plan Elements, 4: The plans/maps should leave no question about soil erosion and sedimentation conditions prior to, during, and after plan implementation, including which BMPs are temporary measures during structural BMP construction, and which will be permanent. **(4)**

Response: The section in Part 2 that discusses BMPs has been revised to state that any temporary BMPs should be identified as such in the Ag E&S Plan. This statement was also added to Part 1.

Additionally, it is stated in both Part 1 and Part 2 that an operation's Ag E&S Plan must reflect existing and proposed conditions and activities on the operation.

21. **Comment:** Page 17, Ag E&S Plan Elements, 6: "All existing BMPs that are necessary for meeting T are expected to either be maintained indefinitely or replaced with different BMPs that also meet T." This was not mentioned explicitly Part 1 of the Manual, and it really needs to be, unless Parts 1 and 2 are consolidated. **(4)**

Response: The section discussing BMPs in Part 1 does contain the following statement: "Existing BMPs that are needed for meeting T must be maintained the entire time they are used or replaced with different BMPs that also meet T."

22. **Comment:** Page 18: If livestock are causing disturbance or bank erosion of intermittent or perennial streams, whether or not the disturbed area is 5,000 or more square feet, BMPs must be

adopted, implemented and maintained to correct or minimize the problem to meet the requirements of the Clean Streams Law, specifically the purpose of Chapter 102 regulations. **(4)**

Response: This is stated in the beginning of Part 1. For clarification, the following statement has been added to Part 2: "The implementation and maintenance of erosion and sediment control BMPs are required for all AHUAs, regardless of the size, and you must identify them in the written Ag E&S Plan if their TOTAL, combined sum on an operation disturbs 5,000 or more square feet."

Additionally, a similar statement was added to Part 1 and Part 2 to indicate that BMPs are required for all agricultural plowing and tilling activities, regardless of the size.

23. **Comment:** Page 18: The BMP implementation schedule must clearly describe the timeline for BMP adoption, specifying which practices will be permanent and which will be temporary. The Manual should emphasize that the schedule must be realistic and account for potential delays caused by weather, obtaining permits, availability of excavating contractors, etc. The current language in the draft Manual is unclear. **(4)**

Response: This section of Part 2 has been revised to state that the schedule should be realistic, accounting for weather conditions, obtaining permits, contractor availability, etc., and that any temporary BMPs should be identified as such in the Ag E&S Plan.

24. **Comment:** Page 21: The Manure Management Manual recommends that pastures be managed to maintain dense vegetation during the growing season at least 3 inches high. The Soil Erosion and Sedimentation Control Manual should also include this recommendation, to be consistent with the manure management requirements, and ensure that the pasture is able to retain soil without erosion. **(4)**

Response: During consultation with the workgroups while developing this guidance, it was determined that the 3-inch pasture stipulation is only applicable to nutrient management planning. 25 Pa. Code § 102.22(a)(2) requires one of the following conditions to consider an area permanently stabilized: a minimum uniform 70% perennial vegetation cover with a density capable of resisting accelerated erosion and sedimentation or an acceptable BMP which permanently minimizes accelerated erosion and sedimentation. This information is included in this section.

Additionally, information has been added to this section regarding overgrazing, including potential ways to identify overgrazing on an agricultural operation.

Part 3 – Agricultural Erosion and Sediment Control Plan

25. **Comment:** Page 24 – Section 1: General Information: The plans/maps should leave no question about soil erosion and sedimentation conditions prior to, during, and after plan implementation, including which BMPs are temporary measures during structural BMP construction, and which will be permanent. **(4)**

Response: Please see the response to comment #20 above.

26. **Comment:** Page 28: The list of practices near streams areas should also include forested riparian buffers. Also, the description of cover crop establishment should focus more on the need for a living crop, with at least 4 inches of height or 50% canopy cover before winter. **(4)**

Response: Forested riparian buffers are included in the third paragraph on this page.

Additionally, the following statement that is found in the Pennsylvania Natural Resources Conservation Service (NRCS) conservation practice standard for cover crop has been added to this page: "To reduce erosion, best results are achieved when the combined canopy and surface residue cover attains 90% or greater during the period of potentially erosive wind or rainfall."

General Comments

27. **Comment:** Please make sure the links to other sources web pages are up to date. For example, the link to the Penn State Agronomy Fact Sheet on page 55 of this draft policy does not link directly to the referenced item. **(1)**

Response: The Department has corrected the Penn State Agronomy Fact Sheet weblink and will ensure that all other weblinks listed in the document are correct and functioning properly prior to formal publication.

Additionally, as the Department can neither control nor anticipate potential updates to website addresses, the following statement has been added to the beginning of Appendix D – Other Sources of Assistance: "The websites listed below are subject to change."

28. **Comment:** I did not see any mention of BMPs for the use/application of fertilizers and/or sewage sludge and other wastes to soils, addressed as to runoff concerns? **(1)**

Response: This document does not address BMPs associated with fertilizers or sewage sludge because the purpose is to address erosion and sediment issues associated with agricultural plowing or tilling activities and AHUAs.

29. **Comment:** I agree wholeheartedly with the initiative that is being put forth with this policy and document. Agriculture and its practices are a large contributor to the issue of soil erosion but are also one of the ones most easily rectified. I am concerned however with the enforcement of this policy. As far as I can see in the document, while it is said that making an Ag E&S plan is required, there is nothing stating that the plan must be submitted to an official. There are also several guidelines for when an Ag E&S should be filed that could be overlooked, either purposefully or accidentally, by the landowner that I think could cause problems in the long run such as the plot size or area affected or grazing times. So I believe that this absolutely should go forward but that more consideration should be taken for enforcement measures. **(2)**

Response: 25 Pa. Code § 102.4(a) does not require submission of Ag E&S Plans to the Department or any other regulatory agency. 25 Pa. Code § 102.4(a)(8) requires that Ag E&S Plans be available for review and inspection at the agricultural operations. The Department also has the authority to require submission of information necessary to review the Ag E&S Plan under 25 Pa. Code § 102.4(c).

Additionally, the document states that written Ag E&S Plans are required for all agricultural operations that disturb a total sum of 5,000 square feet of land either from agricultural plowing or tilling activities or from AHUAs. Animal grazing times on operations are not a factor for Ag E&S Plans.

30. **Comment:** This Manual is a valuable tool to assist farms in preventing erosion and sediment loss, and CBF appreciates the effort to provide guidance to farms in developing Erosion and Sediment Control (Ag E&S) Plans. This provides much needed clear guidance on the necessary measures for developing and implementing an Ag E&S Plan.

However, the improvements in the final draft will have a significant impact only if Department of Environmental Protection (DEP) and partners (including CBF) conduct a successful campaign of outreach, education, and technical assistance. Enforcement action in cases of pollution problems is also required to ensure broad E&S plan development and adoption. We also hope that the E&S planning module within PAOneStop will soon be available to assist farms in developing Ag E&S Plans. The focus of these efforts should be on plan adoption, with all the necessary best management practices (BMPs) established as needed. It is not sufficient to simply have plans developed without being fully implemented, with all BMPs maintained. **(4)**

Response: The Department is in the process of creating training modules to complement this guidance. Part of this training will be focused on the importance of proper implementation and maintenance of BMPs. We are also working in coordination with Penn State Cooperative Extension to ensure that updates to PAOneStop will reflect this guidance. The Department looks forward to working with CBF and other partners to promote and support the development and implementation of Ag E&S Plans on farms across Pennsylvania.

Additionally, the Department can respond to pollution issues as appropriate, which may include enforcement action.

31. **Comment:** We recommend consolidating Parts 1 and 2, to reduce the size of the Manual and the risk that it will be too intimidating for some. Although we understand the concept of having Part 1 for operators and landowners, and Part 2 for plan developers, the two parts make the document repetitive and cumbersome. Part 1 has insufficient information for most farmers to develop plans independently without professional assistance but has helpful questions to guide the planning process. Professional planners should have education and expertise that far exceeds the very useful technical information included in Part 2. CBF recommends combining Parts 1 and 2. The sample plan and appendices provide very useful information. **(4)**

Response: The workgroups that were consulted during the development of this guidance advocated for a manual that could be utilized by both agricultural operators/landowners and new professional planners. It was determined that the most efficient method to accomplish this would be to separate this guidance into two distinct parts, one for agricultural operators/landowners and one for professional plan writers.

Additionally, there is currently no formal Ag E&S Plan guidance that exists within the Department. Part 2 of this document can be utilized by both Department and conservation district staff, particularly new staff that would benefit from a guidance document.

32. **Comment:** The level of "user-friendliness" of the new guidance document will likely vary depending on the person creating the E&S plan. The new DEP E&S Manual was planned and written for agricultural producers and other landowners that may not be familiar with the in-depth technical aspects of E&S planning. The E&S Manual does offer erosion and sediment plans that comply with state regulations in five steps or planning sections, but it requires accessing online sources for maps that identify soil types, measure slopes and predict tolerable soil loss. Therefore, the possibility exists that some agricultural producers will be knowledgeable about conservation planning and will use the E&S Manual successfully, while others may find the format cumbersome and require the support of the conservation district or a private consultant. Using the term "user-friendly" may not accurately describe the E&S Manual for everyone; however, even with the probable need for collaboration with a technical provider, the E&S Manual can be completed in a timely fashion avoiding the exceptionally long delay experienced when the plan is solely the responsibility of the conservation district. **(5)**

Response: The Department agrees that usability of this guidance document will vary depending on the individual. The Department, in collaboration with the workgroups that were consulted during the development of this guidance, endeavored to make the final document as functional as possible for those that may need additional assistance.

33. **Comment:** Clarity is needed regarding the intended audience for each part of the E&S manual. Agricultural producers will need to be mindful that the E&S Manual consists of two parts. The first part contains individual information required for the farmer to complete his own plan, while the second contains additional technical information written for the professional planner. The agricultural producer will need to segregate the first part from the second to avoid confusion and focus only on the information pertinent to writing his own plan. At the same time, information is needed to inform agricultural producers that the E&S plan is to be filed on the premises and does not need to be submitted to any agency but must be available during a complaint or other investigation arising from conservation issues on the farm. **(5)**

Response: The following statement has been added to the end of Part 1: "If you feel comfortable writing an Ag E&S Plan for your operation, you may move on to Part 2 of this guidance. There is also an Ag E&S Plan template in Part 3 of this guidance you may use to complete your plan." This information has also been added to the end of the foreword of the document. Currently, the Department is considering publishing the hard copies of this guidance in a manner that clearly divides the individual "Parts" for both clarity and ease of use.

Additionally, Part 1 and Part 3 include statements that both the operator and landowner should have the plans available for review and inspection.

34. **Comment:** Clarity is needed regarding the potential need to access some of the information needed to complete an E&S plan. Tolerable soil loss and the predicted average annual soil loss are calculated from information available on websites published in the E&S Manual and reported as part of the E&S Plan. The websites could be unfamiliar and a challenge to navigate for some producers which may require additional assistance to complete the calculations. **(5)**

Response: Please see the response to comment #32 above.

35. **Comment:** The practicality of the DEP E & S Manual may not be valid for agricultural producers who experience rill erosion on their farms. Rill erosion is measured by a small ditch

one wide by one inch deep and accounts for soil losses of 6 to 7 tons per acre per year which exceeds the tolerable soil losses (T value) of 3 to 5 tons per acre per year which places the farm out of compliance. The presence of rill erosion disqualifies a producer from using the E&S Manual and will require the assistance of the conservation district, NRCS or a commercial planner to complete an E&S Plan that is compliant with state regulations. On a related note, there is a discrepancy between the description of "rill" on page 52 and the definition of "rill erosion" on page 4, which describes a rill as "typically less than 4 inches deep." At best, the use of different descriptions is confusing. **(5)**

Response: Step 1 and Step 3 in Part 1 indicate that the agricultural operator/landowner should contact a plan writing professional if their fields have any rills or gullies.

Additionally, the definition of "rill erosion" in the definition section of the guidance and the description of rills in Appendix B has been revised to state that rills are usually less than 4 inches deep but are typically about 1 inch in depth and width.

36. **Comment:** Information in the draft manual should be rearranged in order to better facilitate completion of E&S plans. There are two sets of tables located in the back of the E&S Manual. One set of tables offer an example of a completed E&S Plan while the other set consists of blank tables that require information on conservation practices from the agricultural producer. As a practical matter, it may be more convenient to locate the instructions and tables in Part 1 to improve the continuity and flow of information to help the agricultural producer write his own plan. If the rearrangement of the Ag E&S Plan instructions and tables are not feasible, at least a clear reference boldly stated at the end of Part 1 should direct producers to the back of the E&S Manual to find the appropriate instructions and tables. **(5)**

Response: The workgroups that were consulted during the development of this guidance concluded that the template should be placed at the end of the document. The placement was chosen to encourage readers to thoroughly review the sections describing how to write an Ag E&S Plan prior to attempting to complete the template. Also, agricultural operators/landowners are instructed to read Part 2 after reviewing Part 1 if they feel comfortable writing the Ag E&S Plan for their agricultural operation.

Additionally, please see the response to comment #33 above.

37. **Comment:** In conclusion, perhaps the most important purpose that this document should serve is to provide simple, clear guidance to farmers on how to prepare an E&S plan that materially addresses the most concerning features of his operation. PFB therefore recommends that the Department consider developing a "checklist" of features to look for when preparing a plan, and also provide information on where to look for and how to respond to commonly occurring challenges that those features may present. Doing so would give operators their best opportunity to craft a workable plan that meets their obligations in the most cost-effective and efficient manner, while allowing the Department to maximize the value of its available resources. **(5)**

Response: As agricultural operations will each have different site-specific conditions to consider, adding this information would inevitably omit numerous situations. It would also add to the length of this document, which was not recommended by the workgroups the Department consulted during the development of this guidance.

Additionally, Step 2 in Part 1 lists common issues that agricultural operators/landowners may encounter, and Part 1 provides charts of common BMPs. Both sections have notations indicating that these lists are not all-inclusive, and every operation has site-specific conditions to consider.