The Pennsylvania Act 38 Nutrient Management Program Technical Manual has been developed in order to provide consistent program guidance, further refining the requirements in the regulations, to be utilized in the development, review, and implementation of Act 38 nutrient management plans. This update bulletin highlights the most important changes and revisions made in the new manual Version 11 released in October 2019 which supports Version 7.x of the Nutrient Management Plan Standard Format, Version 5.x of the Nutrient Balance Sheet Standard Format, and Version 2.x of the Pennsylvania Phosphorus Index. The guidance in Technical Manual Version 11 is required for nutrient management plan submissions for Crop Year 2021 and beyond.

**MANUAL COVER PAGE / PREFACE / TABLE OF CONTENTS**

The following updates were made on the Cover Page in Version 11.0:
- The version number was changed to 11.0.
- The Planning Tool version numbers were changed to the following:
  - Nutrient Balance Sheet Version 5.X
- Updated dates made to correspond with updated version numbers.

**NMP SUBMISSION: REQUIRED APPENDICES AND SUPPLEMENTAL INFORMATION**

Guidance was updated in regards to CAFO NMP Reviews.

The new guidance provides that if the Department of Environmental Protection (DEP) does not provide comments to the reviewing county conservation district within the 30-day public notice period, the conservation district is too assume that DEP has no comments, unless advised otherwise.

The new guidance also provides that once the Pa Bulletin notice is submitted to DEP for publication, DEP will inform the Conservation District of the anticipated Pa Bulletin publish date. The Conservation District will then notify the plan writer.

**SECTION I: IDENTIFICATION OF CAOS**

Guidance was updated in regards to the following:
1. The animal weights used the sample CAO calculation were updated to the new standard animal weights that were approved by the SCC in 2017.
Guidance was added in regards to the following:

1. “What is required of a commercial nutrient management specialist to submit to the delegated conservation district and/or the SCC to prove an operation is not a CAO.”
2. “What is required of a commercial nutrient management specialist to submit to the delegated conservation district and/or the SCC to prove an existing CAO is no longer a CAO and wishes to withdrawal from the program.”

**NUTRIENT MANAGEMENT PLAN SUMMARY**

Guidance was updated in regards to the following:

1. The Manure Storage Winter Capacity Planning Level for CAFOs is to be used for all liquid, semi-solid, and solid manure storages.

Guidance was added in regards to the following:

1. Refer to Appendix 2 for detailed discussion on Operation Acres / Animal Equivalent Units / Animal Equivalent Units per Acre.
2. Discussion on the whole farm note that should be used in regards to the requirements for fall manure applications that require at least 25% cover.

**APPENDIX 1: NUTRIENT MANAGEMENT PLAN AGREEMENT AND RESPONSIBILITIES**

Guidance was updated in regards to Agricultural Erosion and Sedimentation plan verification that reads:

“If an operation is not required to have an ag E&S plan, as they have no farm fields (export all manure) and they have no ACA’s, the planner should check the No Ag E&S plan required box.”

**APPENDIX 2: OPERATION INFORMATION**

Guidance was updated for the following:

1. That if emergency manure stacking areas are needed, that they should correspond with the operation map.

Guidance was added for the following:

1. The required information in the Operation Description was updated to include how mortality compost is handled on the operation, if applicable.
2. The “Names & Addresses of Owners of Rented or Leased Land” section was expanded to include facilities, and now reads “Names & Addresses of Owners of Rented or Leased Land and/or Facilities”. 
APPENDIX 3: MANURE GROUP INFORMATION

The following topics and edits were addressed in updates to Appendix 3: Manure Group Information:

- Small quantity manure groups guidance
- Poultry outdoor access areas guidance
- Manure analysis report dates guidance
- Updates to web links

Small Quantity Manure Groups
The small quantity manure groups section was revised to include guidance for uncollected manure in addition to collected manure. The updated documentation requirements for a small quantity manure group are as follows:

- The Operation Description section of Appendix 2: Operation Information must include a description of how the manure in the small quantity manure group will be handled and utilized. The description must include where the collected manure will be applied, and, if applicable, the specific pasture that will receive the uncollected manure.
- If the collected or uncollected manure from the small quantity manure group will be applied to a crop field or pasture, a note for the crop management unit(s) receiving the manure must be included in the NMP Summary Notes.
- The animal types, number and weights must be entered into Appendix 3 but manure production data does not need to be entered. The animal information is necessary to complete the CAO determination for the operation.

Poultry Outdoor Access Areas
A “Poultry Outdoor Access Areas” section was added which states:

“Poultry operations that provide access for the birds to outdoor areas can choose to manage the area as a pasture and include it as a field in Appendix 4 or identify and evaluate the area as an animal concentration area in Appendix 6. In both options, all Act 38 planning requirements must be met.”

Manure Analysis Report Dates
A sentence was added to the “Manure Analysis Regulatory Requirements” section to refer to Section V: Plan Review and Implementation in the manual for detailed guidance on manure analysis report dates for plan submission.

Finally, many of the web links were updated so that the links are current.

APPENDIX 4: CROP AND MANURE MANAGEMENT INFORMATION

The following topics and edits were addressed in updates to Appendix 4: Crop and Manure Management Information:

- Small quantity manure groups guidance
• Poultry outdoor access areas guidance
• Soil test report dates guidance
• Commercial vegetable crop removal values
• Uncollected manure application rates
• Updates to web links

Small Quantity Manure Groups
Guidance was added to the “Field Identification” section to clarify what is required for pastures that are grazed by animals in a small quantity manure group. The guidance states:

“Pastures that are grazed by animals in a small quantity animal group must be included in Appendix 4 and meet all the requirements of a CMU, including soil test results, fertilizer applications and manure applications from other manure groups. The amount and rate of uncollected manure from a small quantity manure group does not need to be included in Appendix 4. Refer to the Small Quantity Manure Groups guidance in Appendix 3 – Manure Group Information.”

Poultry Outdoor Access Areas
Guidance was added to the “Field Identification” section to provide the option to manage poultry outdoor access areas as a crop field in Appendix 4 or as an animal concentration area in Appendix 6. The guidance states:

“Poultry operations that provide access for the birds to outdoor areas can choose to manage the area as a pasture and include it as a field in Appendix 4 or identify and evaluate the area as an animal concentration area in Appendix 6. In both options, all Act 38 planning requirements must be met.”

Soil Test Report Dates
A sentence was added to the “Soil Testing” section to refer to Section V: Plan Review and Implementation in the manual for detailed guidance on soil test report dates for plan submission.

Commercial Vegetable Crop Removal Values
The “Commercial Vegetable Crop Removal Values” section was updated to read:

“The following standard removal values should be used for all commercial vegetable crops: 100 lb. N, 50 lb. P₂O₅, and 215 lb. K₂O per acre.”

Uncollected Manure Application Rates
The following guidance was added to the “Planned Manure Rate” section to provide specific guidance on how to calculate the planned manure application rate for uncollected manure:

“Planned manure application rates for pastures are determined by dividing the amount of uncollected manure on the pasture by the acres in the pasture. If the Grazing Calculator is
used to determine the uncollected manure application rate, a printout of the Grazing Calculator should be included in Appendix 10.”

Finally, many of the web links were updated so that the links are current.

**APPENDIX 5: PHOSPHORUS INDEX**

The following topics and edits were addressed in updates to Appendix 5: Phosphorus Index:
- Significant management changes criteria
- Updates to web links

**Significant Management Changes Criteria**
The phrase “manure storage structure installation” was removed the introductory language of the “Significant Farm Management Change” section because it is not on the list of the four specific criteria that define a significant management for the P Index.

Finally, many of the web links were updated so that the links are current.

**APPENDIX 8: IMPORTER/BROKER AGREEMENTS AND NBS**

Guidance was removed for the following:
- All references and guidance related to P Banking, as P Banking is no longer an option for NBSs.
- The requirement for manure exported out of state to have the other state confirm that the farm meets that state’s requirements.

Guidance was added for the following:
1. Clarification on signed export or broker agreements that reads: “The signed agreements do not need to be re-signed or updated with each NMP Update or Amendment, unless a substantial change has occurred with the template provided or the parties or provisions contained in the signed document. Substantial changes could include changes in manure amounts, changes in types of manure, change in application season, and change in acres available.”
2. Guidance on when importers may or may not need a Chapter 91 MMP.
4. Guidance that the current manure analysis or the running average analysis can be used.

**APPENDIX 10: SUPPORTING INFORMATION AND DOCUMENTATION**

Guidance was removed for the requirement for manure used out of state on owned or rented land to have the other state confirm that the farm meets that state’s requirements.
SECTION IV: RECORD KEEPING AND INFORMATIONAL REQUIREMENTS

Guidance was added for BMP designs and certification for new liquid and semi-solid manure storage facilities which states:

“At least 2 weeks prior to installation of the facility or the repair, the registered engineer shall submit a verification (including a quality assurance inspection plan for construction) to the Commission or delegated conservation district documenting that the design, meeting the requirements including applicable setbacks, has been completed. Following completion of the installation or repair, the responsible engineer and construction contractor shall certify to the Commission or delegated conservation district that construction of the manure storage facility was completed according to the design, construction and location standards.”

SECTION V: PLAN REVIEW AND IMPLEMENTATION

Guidance was updated for Ag E&S so that it matched with the Department of Environmental Protection’s guidance.

Guidance was added that if the NMP is deemed administratively incomplete, the entire NMP should be returned.

SECTION VI: PLAN AMENDMENTS AND TRANSFERS

Guidance was updated on a change in crop management that results in a reduction of greater than 20% in nitrogen necessary for realistic expected crop yields or in the amount of nitrogen that the crops will use in the given crop year. The updated guidance reads:

“This 20% reduction is a “whole farm reduction” of the nitrogen necessary, not a single CMU (field) reduction.”

SUPPLEMENT 1 - AGRONOMY GUIDE TABLES

Supplement 1: Agronomy Guide Tables were updated to include new daily manure production and manure analysis book values for layers, broilers and turkeys in Table 1.2-13 of the 2019-2020 Penn State Agronomy Guide.

SUPPLEMENT 2 - SAMPLE NUTRIENT MANAGEMENT PLAN
SUPPLEMENT 3 - SAMPLE NUTRIENT BALANCE SHEET
SUPPLEMENT 4 - SAMPLE NUTRIENT BALANCE SHEET

Supplement 2: Sample NMP, Supplement 3: Sample NBS (Excel), and Supplement 4: Sample NBS (Word) were updated using the most recent versions of the Act 38 planning tools.
SUPPLEMENT 12 - MANURE EXPORT SHEET

The forms were reformatted so they print on a single page.

SUPPLEMENT 18 – NM PROGRAM RESOURCE LIST

Supplement 18: Nutrient Management Education Program Resource List was updated to reflect the decision to no longer distribute a Nutrient Management Resource CD during the Nutrient Management Orientation training.

In addition, many of the web links were updated so that the links are current.