

Tech Manual Update Bulletin

Pennsylvania Nutrient Management Act Program

Version 12; Record of Change October 2023

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 manual Version 12, Record of Change October 2023 which supports Version 9.x of the Nutrient Management Plan Standard Format, Version 7.x of the Nutrient Balance Sheet Standard Format, and Version 2.x of the Pennsylvania Phosphorus Index. The guidance in Technical Manual Version 12. Record of Change October 2023 is required for Nutrient Management Plan submissions for Crop Year 2025 and beyond.

APPENDIX 2: OPERATION INFORMATION

Updated guidance was added to the following area:

Updated language on what is needed for contiguous land that are owned by a CAO but farmed by another. The updated guidance states:

1. *If manure produced at the operation is applied to these owned acres, whether or not these acres are rented to another operator, the owned acres located at (contiguous with) the animal facility, would need to be included in the NMP.*
 - a. *If the acres are managed by the NMP operations, they will be planned in Appendix 4 and 5 of the NMP.*
 - b. *If the acres are rented to another, the nutrient application is accomplished with a Nutrient Balance Sheet (NBS), using Option 3. This Option 3 NBS should be included in Appendix 8 of the NMP, along with the proper exporter / importer agreement and note in the operation description in Appendix 2.*
2. *If no manure from the operation is applied to these acres, but they are farmed by the operator or someone under his direction, these acres must be included in the Appendix 4 and 5 of the NMP.*
3. *If no manure from the operation is applied to these acres, and these acres are rented out to another operator, these acres do not need to be included in the NMP, but it is recommended.*

APPENDIX 3: MANURE GROUP INFORMATION

Updated guidance for naming of animal groups. The updated guidance states:

Animal Group Name

The animal group name should have clear meaning to the farmer.

Important Note: Animal groups with uncollected manure, (animals that have days on pasture), must be given unique animal group names. This is necessary for the NMP spreadsheet to function properly. For example, an animal group of dry cows contributing to a spring and fall manure group should be given the animal group names of “Dry Cows Spring” and “Dry Cows Fall”. This is necessary for the uncollected manure to be accurately accounted for when allocating it in Appendix 4 Input sheet.

Animal Weight

Added guidance for determining weights of growing animals. The added guidance states:

For determining animal weights of growing animals in the NMP Spreadsheet, refer to the NMP Excel User Guide for guidance on how to use the Growing Animal Weight Calculator Sheet.

APPENDIX 4: CROP AND MANURE MANAGEMENT INFORMATION

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

- Double Crops
- Soil Test Recommendations
- Net Nutrients Required
- Removal of Total N option for planning. N Fractions is the only method allowed to be utilized now

Double Crops

Added guidance for planning of double crops. The added guidance states:

A double crop is described as growing two separate and distinct crops on a field during a crop year. They are designated as a “Winter Crop” and a “Summer Crop” in a double crop. Double crops are to be planned as two separate crops in the crop year. When planning a double crop, the winter crop must be entered before the summer crop in Appendix 4 Input for the calculations to work properly. The field IDs must be the same for both instances of the field.

Soil Test Recommendations

Added guidance for planning crop yields outside AASL Soil Test Recommendations. The added guidance states:

*If you enter a yield that’s outside the range listed in the AASL Soil Test Recommendations for Agronomic Crops an asterisk * will be in the PSU recommendation cells. You will need to enter user recommendations in the cells provided. You may also need to enter user recommendations for crops that are not in the AASL Recommendations for Agronomic Crops list. Please reference the publications or data source used, in Appendix 10 of the NMP.*

Net Nutrients Required

Added guidance for net nutrients required for double crops and multiple manure applications. The added guidance states:

Net nutrients required values are obtained by subtracting amounts of starter fertilizer and residual manure nitrogen and residual legume nitrogen from the soil test nitrogen recommendation and subtracting the amount of phosphorus and potassium applied in the starter fertilizer from the soil test phosphorus and potassium recommendations. The amount of net nutrients required can also be used by the operator to determine fertilizer needs if the planned manure is not applied to the field. Refer to the NMP Summary section for additional information and guidance.

- *The net nutrients required for a summer crop in double crop reflect the P_2O_5 - K_2O carryover balance from the previous crop.*
- *The net nutrients required for multiple manure applications, on the same crop, in the same crop year, reflect the N - P_2O_5 - K_2O balance after manure from previous manure applications.*

Total N Method of Planning

Removed all guidance that was relevant to the Total N Method of planning. The N Fractions Method of planning is the only allowable method now. This change was made because the 2023 – 2024 Penn State Agronomy Guide removed Total N.

APPENDIX 5: PHOSPHORUS INDEX

Changes only included cleaning up language. No guidance was added or deleted.

APPENDIX 6: MANURE MANAGEMENT

Added guidance for poultry operations that provide outside access for birds. 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. Outdoor access areas 1 acre or less in total size are encouraged to be treated as ACA's. In both options all Act 38 planning requirements must be met.

SUPPLEMENT 1 - AGRONOMY GUIDE TABLES

Supplement 1: Agronomy Guide Tables includes the values tables from the Penn State Agronomy Guide that are used in Act 38 nutrient management planning. Most of these tables are located in Part 1, Section 2: Soil Fertility Management.

The 2023-2024 Agronomy Guide eliminated the Total N Method of planning. N-Fractions is the only method of planning allowable now.

Supplement 1: Agronomy Guides Tables was updated to reflect the new numbering.

In addition, every reference to specific tables in the entire Technical Manual have updated to the new numbers.

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 8- MANURE STORAGE VOLUME CALCULATIONS

Updated example calculation that had an error.

SUPPLEMENT 11 – MANURE HAULER / BROKER / AGRICULTURAL OPERATION UNIVERSAL AGREEMENT

Added new universal sample agreement for the following scenarios:

1. Manure Hauler / Agricultural Operation.
2. Manure Hauler / Exporting Agricultural Operation.
3. Manure Hauler / Importing Agricultural Operation.
4. Manure Hauler / Importing Agricultural Operation, use for other than land application.
5. Manure Hauler / Importing Agricultural Operation, importing into from another state.
6. Manure Hauler / Importing Agricultural Operation, exported from Pa to another state.
7. Manure Broker / Exporting Agricultural Operation.
8. Manure Broker / Importing Agricultural Operation.
9. Manure Broker / Importing Agricultural Operation, use for other than land application.

SUPPLEMENT 13 – EMERGENCY RESPONSE PLANS

Updated liquid manure emergency response plan and created a new solid manure emergency response plan. Spanish version of each have also been created or updated.

SUPPLEMENT 18 – NUTRIENT MANAGEMENT EDUCATION PROGRAM RESOURCES LIST

Changes only included cleaning up language and formatting. No guidance was added or deleted.