



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL  
PROTECTION



Bureau of Clean Water

# **Manure Management Plan (MMP) Guidance (361-0300-002)**

## **Survey Summary Results**

Tom Wolf, Governor

Patrick McDonnell, Secretary

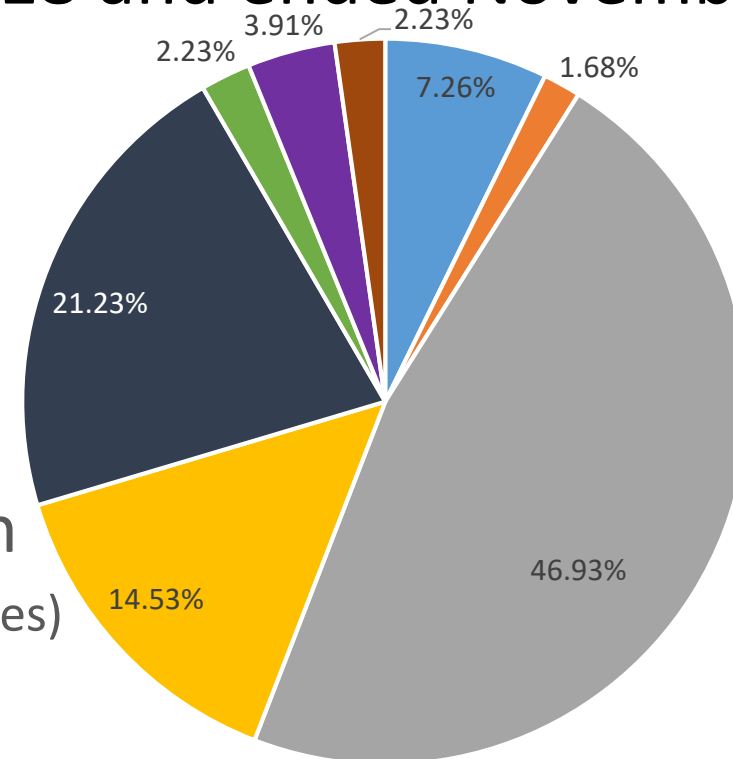
# MMP Technical Guidance Document

- The Manure Management Manual Technical Guidance was effective October 29, 2011
- The Department is seeking to start the revision process to this guidance document.
  - Areas for improvement – clarity, readability, usability
  - Better certainty for completeness – formatting and structure
  - Potential to include items missed – manure spreader calibration, etc.
- A survey was developed requesting feedback on revisions
  - Conservation Districts, Certified Nutrient Management Specialists (public and commercial), Certified Manure Haulers and Brokers, Ag Advisory Board and Nutrient Management Advisory Board

# MMP Technical Guidance Document

- The survey opened on October 29, 2018 and ended November 30, 2018.
- 156 survey respondents

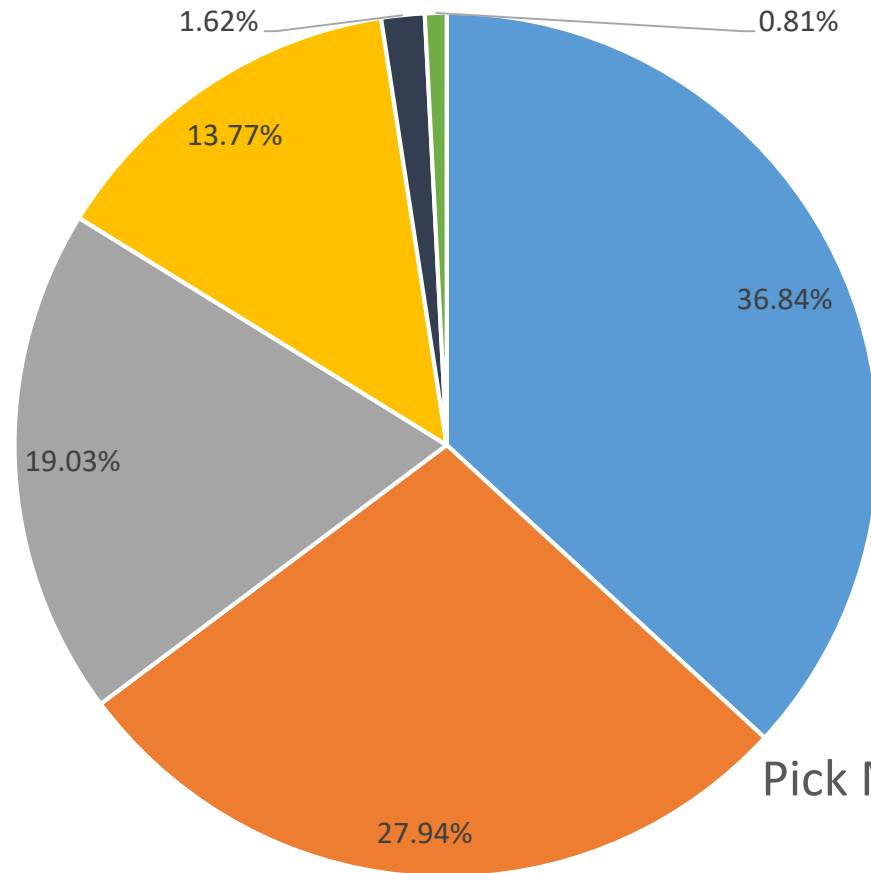
Respondent's Current Occupation  
Pick Multiple (179 total responses)



- State Agency
- County Conservation District
- Certified Commercial NM Specialist
- Hauler/Broker

- Federal Agency
- Farmer
- PSU
- Other

# MMP Technical Guidance Document



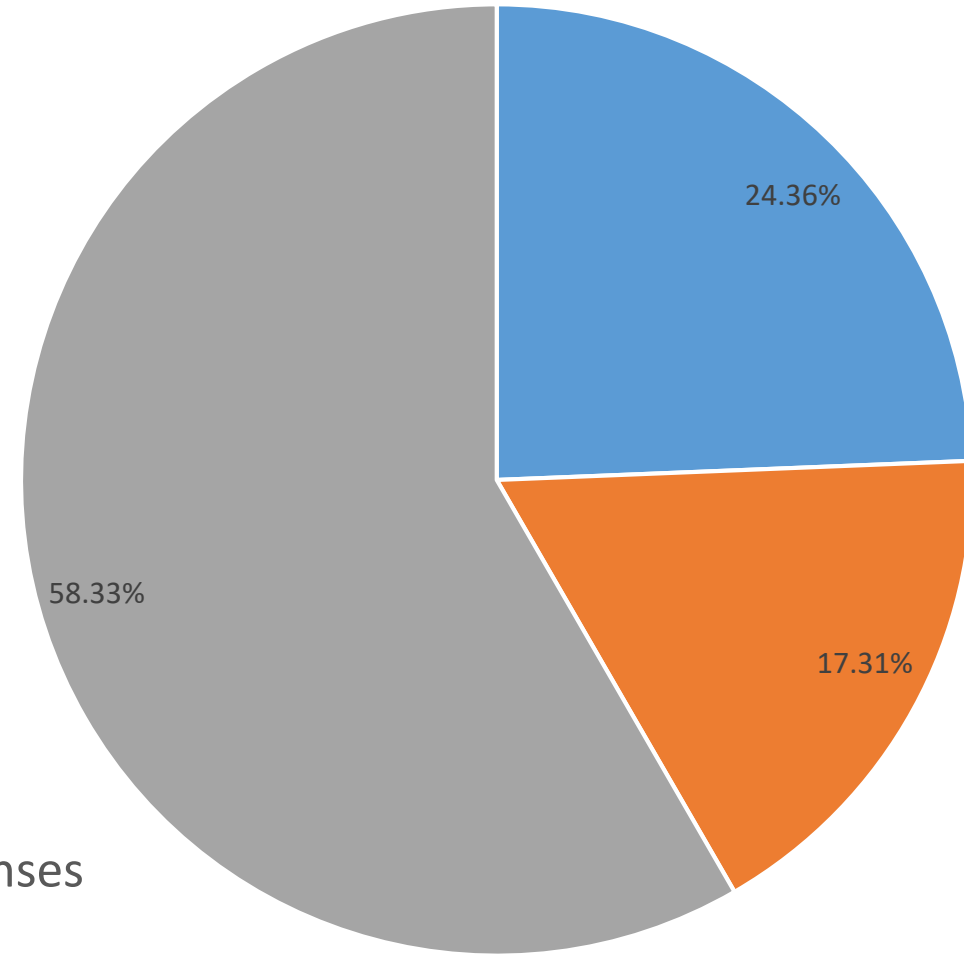
Respondent's Professional Interaction with the Manure Management Manual

■ Planner ■ Verifier ■ BMP Designer/Engineer ■ Implementer (Owner/Operator) ■ Hauler/Broker ■ Other

# MMP Technical Guidance Document

## Number of Years Working with the Manure Management Manual

156 total responses



■ 0-3 Years

■ 3-5 Years

■ Over 5 Years

# MMP Technical Guidance Document – Survey Questions

## 5. Please rate the importance of the following revisions to the MMM:

	Not at all important	Slightly Important	Important	Fairly Important	Very Important
Separate the packet into 4 parts (Instructions, Plan, Record-keeping forms, Charts)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Create a minimum threshold for the requirement to complete the MMP. Example: 8 AEU's and no ACAs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Define "dense vegetation"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Add a signature line	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Move date of development to a more visible location	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# MMP Technical Guidance Document – Survey Questions

Create a method to encourage annual review of the Manure Management Plan (MMP)

Clarify the Manure Application Table Instructions

Make the following change to the Pasture Management Worksheet: "I am managing my pastures by maintaining dense vegetation in the pasture throughout the growing season." should be changed to "...grazing season."

Add an agricultural wastewater worksheet

Make the agricultural wastewater note more visible

Include a manure spreader calibration worksheet

Add a stacking/stockpiling worksheet

Make the stacking/stockpiling requirements more visible

Remove the manure storage facility freeboard record-keeping requirement

Include AEU/ac calculation box

Add a section to the instructions describing plan implementation and record-keeping

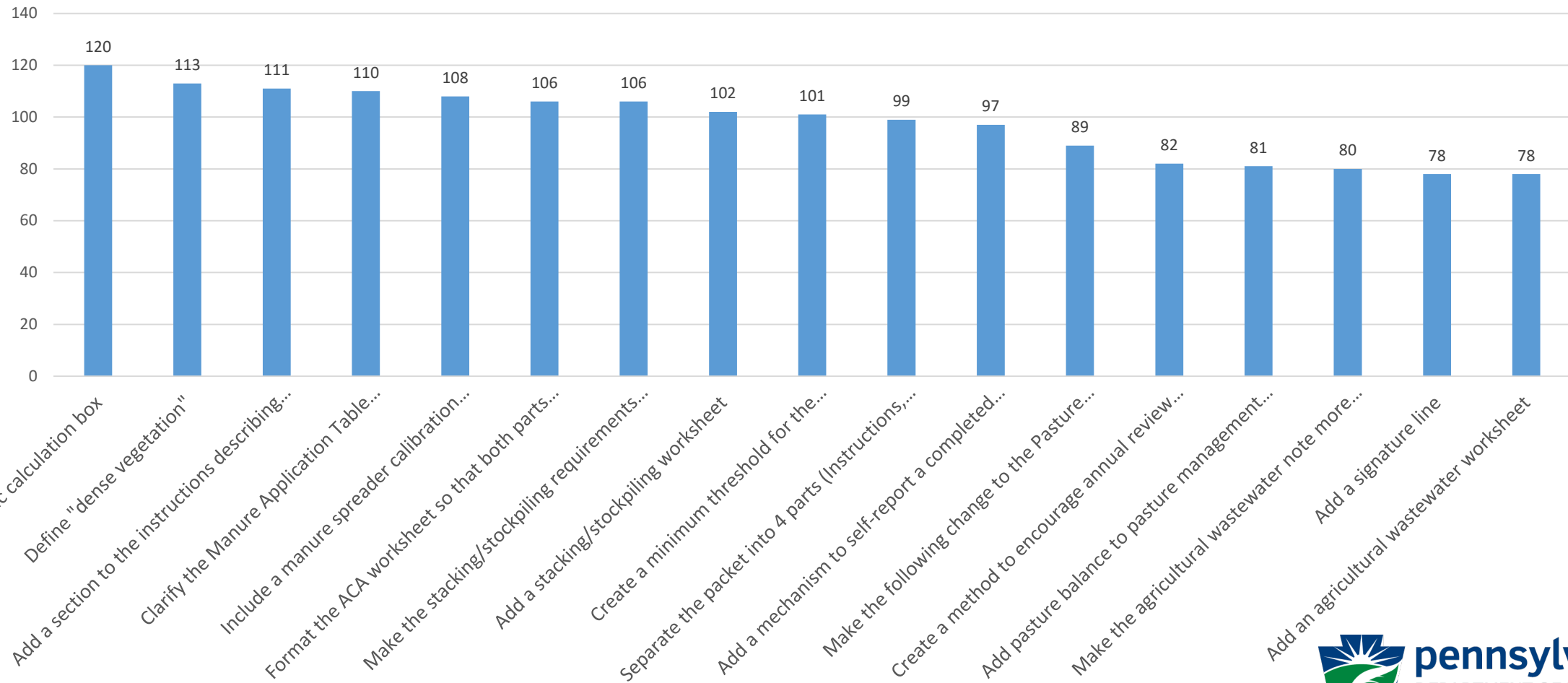
Add pasture balance to pasture management worksheet

Format the ACA worksheet so that both parts are on the same page

Add a mechanism to self-report a completed plan.

# MMP Technical Guidance Document – Trends

- 136 of 156 respondents believe that revisions to the MMM are needed.
- Of those 136 over half believed that the following is **Important to Very Important**





# MMP Technical Guidance Document – Additional Comments

- Additions to Manure Application Tables
  - Crop types
    - Vegetables
    - Tobacco
    - Double-cropping
    - Alfalfa
    - Soybeans
    - Pumpkins
  - Manure types
    - Small Animals
- Pasture Management
  - Language should state dense vegetation is present throughout the year, rather than growing or grazing season.
  - Enhance pasture management worksheet to include BMPs, management strategies, and comments section.
  - Add N/A selection to be used if the worksheet is not applicable.
  - Create pasture management recordkeeping form

# MMP Technical Guidance Document – Additional Comments

- Create Simplified small operation MMP
  - Maximum 2 pages plus map
  - Includes animal group table/AEU calculation table, manure handling for home gardens, and pasture management.
- Create eMMP
  - Potentially tie to PA OneStop
  - Plan writer could answer questions and be directed to the appropriate screens/sections to be completed based on the answers to those questions.
  - A report generated from an eMMP or a MMP electronic template should be easily modified for formatting and include an interactive table of contents.
  - Mechanism for self-reporting, record-keeping, and facility the use of NBSs for MMP development.
- Excel format should be available.

# MMP Technical Guidance Document – Additional Comments

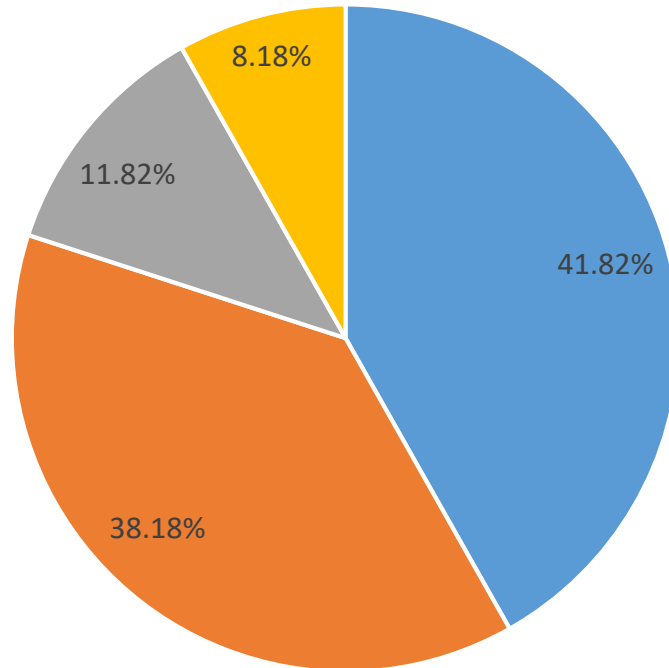
- Base the plan on soil and manure tests.
  - Add record keeping form to encourage regular testing
- Include a Generated Manure Table and Manure Balance.
- Clarify what is meant by acres available for manure application and pasture acres.
  - It is possible that pasture acres are counted twice if they are mechanically applying manure to the pasture.
    - An AEU/ac calculation would solve this problem.
- Clarify that solid manure storages are required to be listed on the Manure Storage Facility Worksheet.
- Modify record-keeping forms for the crop year.
- Provide an emergency response plan worksheet.
- Provide guidance on mortality composting.

# MMP Technical Guidance Document – Additional Comments

- Maintain consistency between Act 38 regarding
  - Setbacks
  - Winter application
  - Manure stacking/stockpiling
- Consideration for non-land-applied export
- Create worksheet for imported manure.
- Create worksheet for exported manure.
- MMM should be abandoned and replaced with Act 38 equivalent

# MMP Technical Guidance Document – Minimum Threshold

- 111 of 156 (71%) respondents ranked the establishment of a minimum threshold for the requirement to complete the MMP as **Important-Very Important**. The breakdown of the desired threshold is as follows:



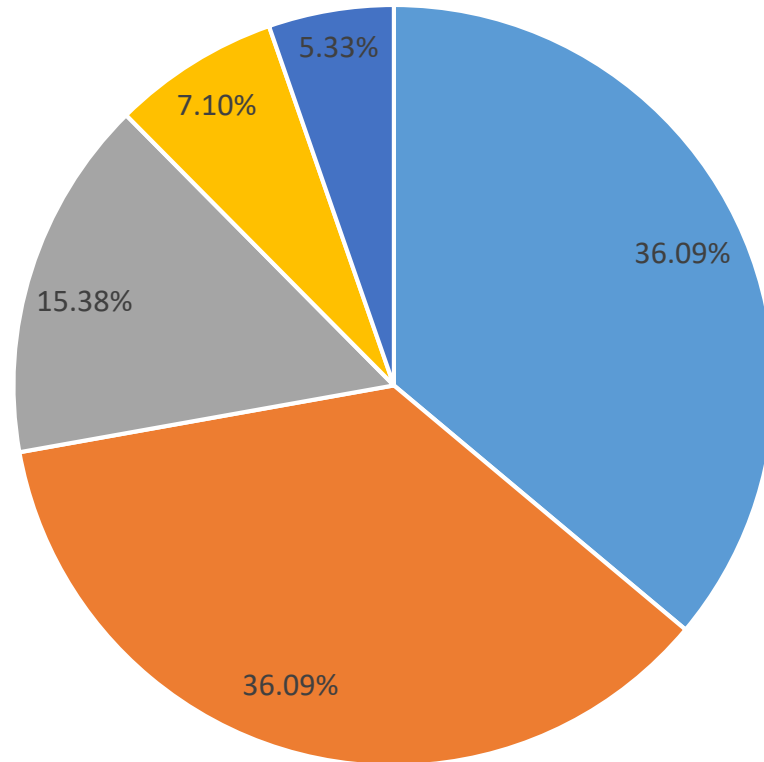
- Less than 8 AEU's and no ACAs
- 8 AEU's and no ACAs
- No Minimum Threshold
- Other

Other includes the following:

- Less than 1.2 AEU's and no pollution events or ACAs
- Less than 2 AEU's and no ACAs
- 3 AEU's and no ACAs
- 4 AEU's and no ACAs

# MMP Technical Guidance Document – Manure Application Tables

- 119 of 156 (76%) respondents ranked the clarification of the Manure Application Tables as Important-Very Important. The breakdown of points to clarify is as follows:



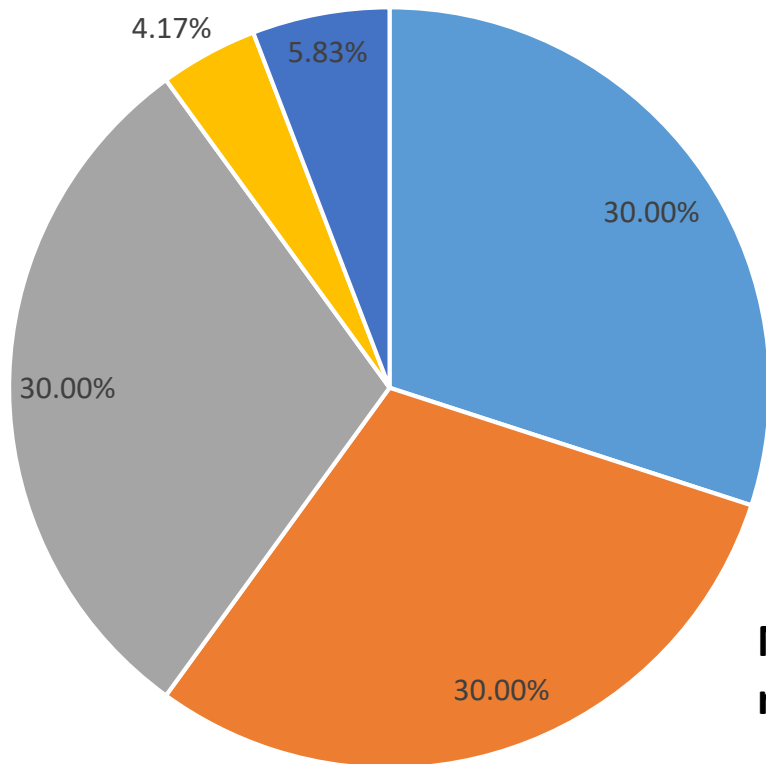
Other includes the following:

- Simplify
- Differentiate the P and N charts
- Eliminate the tables
- Add crops/manure types
- Address phosphorus recommendations and limits
- Provide calculation space
- Account for manure applied on pastures

- Determining Supplemental Fertilizer Recommendations
- Determining Manure Application Recommendations
- Incorporation
- Manure Application Tables do not need clarification
- Other

# MMP Technical Guidance Document – Annual Review

- 88 of 156 (56%) respondents ranked the creation of a method to encourage annual review as Important-Very Important. The breakdown of suggested methods is as follows:



Other includes the following:

- Review every 5 years
- All operations should submit an Act 38 Plan; eliminate the MMP.
- Do not require annual review
- Provide examples of what management changes would trigger an update.
- Add update sheet to record-keeping forms where they can write the date they reviewed their plan

**NOTE: Some answered the question as though annual review was required to be conducted by the CD**

- Add a reminder to record-keeping forms
- Add reminder to plan summary
- Other

- Add reminder to instructions
- Method to encourage annual review is not necessary

# MMP Technical Guidance Document – Owner/Operator

- 34 of 156 respondents are farm owners or operators.
- The 34 owner/operators, also comprise:
  - 15 planners
  - 7 verifiers
  - 6 BMP designer/engineers
  - 2 hauler/brokers
- 26 believe revisions are needed
- 8 do not believe revisions are needed
  - Of those 8, 5 still believe it is important-very important to include an AEU/ac calculation box



# MMP Technical Guidance Document – Summary

- Majority of owner/operators, verifiers, planners, and respondents overall believe a revision is necessary.
- Even those that do not believe a revision is necessary, a majority identified Important-Very Important revisions to be addressed.
- A greater percentage of owner/operators (24%) do not believe a revision is necessary than verifiers (9%) and planners (13%)
  - Owner/operators may be more cautious about making revisions to the MMM

# MMP Technical Guidance Document – Summary

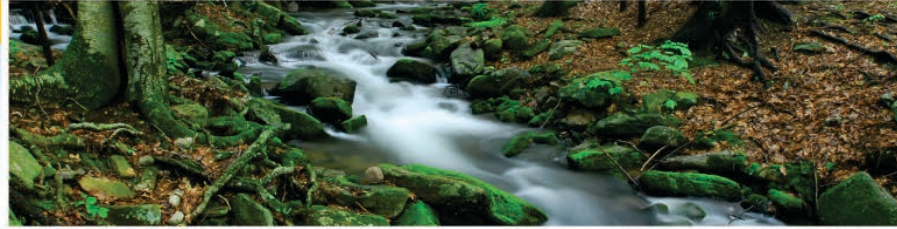
- The most respondents in all groups identified the inclusion of an **AEU/ac calculation box** as the Important-Very Important except owner/operators.
- The most owner/operators identified adding a section to the instructions describing **plan implementation and record-keeping** as Important-Very Important.
- Increasing the visibility of the **agriculture wastewater** note was identified by the majority of owner/operators, verifiers, and planners.
  - A majority of verifiers and planners would like to see an **Agricultural Wastewater Worksheet** created.

# MMP Technical Guidance Document – Summary

- Increasing the visibility of the **stacking/stockpiling** note was identified by the majority of owner/operators, verifiers, and planners
  - A majority of owner/operators, verifiers, and planners would like to see a **Stacking and Stockpiling Worksheet** created.
- The following were repeatedly mentioned in the additional comments.
  - eMMP
  - Small operation MMP
  - Include a generated manure table
  - Additions to Manure Application Tables
  - Changes to Pasture Management Worksheet
  - Clarification of acres for manure application



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