# Manure Management Manual Revisions

Steve Taglang

Jim Spontak

# How We Got Here?

- December 2009 a Workgroup was formed
- Workgroup met three times to provide input for the development of the document
- June 16 the Draft Document Presentation was made to Agricultural Advisory Board

# Changes to the MMM

- Penn State Agronomy Guide references
- Plan Format
- Phosphorus
- Manure testing
- Manure management on environmentally sensitive areas
- Winter application restrictions
- Manure storage assessment
- Field stacking requirements
- Pasture Management
- Animal Concentration Areas

# Application Rates

- In determining rates, farmers have three options
  - Use “Book Values” based on manure type and crop group
  - Use nitrogen or phosphorus balance worksheets to establish rate
  - Have a certified planner develop the rates using the PA Phosphorus index

# Application Setbacks

- Except where the farmer uses the PA Phosphorus Index to develop application rates, a farmer may not mechanically apply manure within the following setback areas regardless of the slope or ground cover
  - Within 150 of a lake, a pond, or the top of bank of a perennial or intermittent stream
  - Within 100 of an existing open sink hole
  - Within 100 feet of a private or public drinking water source
  - Within concentrated water flow areas where vegetation is not maintained

# SETBACKS

- Farmers that use a certified nutrient management planner to develop their plan using option #3 and the PA Phosphorus Index can have reduced setbacks.

- This will depend on what Best Management Practices (BMPs) are used on the farm. For example a vegetated buffer along the stream may permit closer mechanical application.

# Winter Spreading

- Yes you can apply in the winter!
- You can apply on frozen and snow covered ground but you must abide by the following
  - Maximum application is 5,000 gallons of liquid manure or 20 tons per acre dry manure. Or you can apply at the phosphorus removal rate for the coming year's crop
  - An additional setback of 100 feet from an above ground inlet to an agricultural drainage system if the drainage is towards the inlet
  - At application time, all fields must have at least 40% crop residue or an established growing cover crop, hay or pasture. Corn silage fields without a growing cover crop, corn grain fields where most of the fodder has been removed and soybean fields usually will not meet 40%
  - Manure may not be applied on slopes greater than 15% (A, B, and C slopes)
  - Application must be done according to an agricultural Erosion and Sediment pollution control plan.

# Manure Storage Facilities

- Manure management must assure that manure not immediately applied is properly stored. Manure storage facilities include structures such as earthen ponds, concrete tanks located outside or under the barn, above ground steel tanks and roofed stockpiling/stacking facilities.

- The plan must list all existing manure storage facilities (and any planned expansion or additions). For liquid or semi-solid manure storage facilities, the plan must document the type, date of construction, estimated capacity, and environmental evaluation of the structure.

# Liquid or Semi-Solid Manure Storage

- On a quarterly basis, evaluate the storage for potential discharges. The farmer must document that there is:
  - No evidence of overtopping
  - 12 inches of freeboard for all ponds 6 inches for others
  - No visible cracking or other problems with concrete structures that would indicate leakage
  - No visible slope failures, liner deterioration, or any knowledge of water pollution problems associated with the storage

# Manure Storage

- Any discharges or potential discharges need to be addressed immediately.
- Liquid or semi-solid manure storage facilities built in the year 2000 and later must be designed by a registered Pennsylvania Professional Engineer.
- Maintain a copy of the certification from the engineer at the farm.

# Temporary Stockpiling/Stacking

- Daily hauling operations may have one or more temporary stacking areas to deal with situations when application is unacceptable. Requirements include:
  - Keeping all stockpiles or stack 150' from sensitive areas, 100' from a drinking water well or open sinkhole, out of concentrated flow.
  - Stockpiling on improved pads whenever possible, capture run-off
  - Stacking in the same field only once every four years. Re-vegetate with grasses or legumes
  - Placing the stack at the top of a hill and diverting clean water
  - Placing the stack on less than 8% slopes and orient up and down the slope
  - Having enough bedding in the stack to allow it to be at least 5' high
  - Covering the stack within 15 days if it is to be there 120 days or more

# Pasture Management

- All pastures on the farm must be included in the plan. Farms with a grazing plan that meets the PA Tech Guide are good to go. No detailed planning is required for a pasture that is:

  - 150' from a lake, pond, stream, or other surface water. This can be reduced to 50' if the area between the water and pasture is a permanent non-grazed vegetated buffer strip

  AND

  - Composed of dense vegetation (minimize bare spots, 3" high all year, and 80% uniform vegetative cover)

# Pasture Management

- For pastures that do not meet both of these requirements, the farmer must follow a more detailed pasture management approach using either nitrogen or phosphorus Stocking Rate Tables or a nitrogen or phosphorus based Pasture Balance Worksheet.

# Animal Concentration Areas

- ACAs (also "Animal Heavy Use Areas") are barnyards, feedlots, loafing areas, exercise lots or other similar animal confinement areas that will not maintain the dense vegetation of a pasture.
- ACAs do not include areas managed as pastures or other cropland.
- Animal access ways, feeding, watering, and shade areas or walkways are not considered ACAs if they do not cause a direct flow of manure contaminated runoff to streams, lakes, ponds, or sinkholes.

# ACAs

- ACAs located within 150 feet a perennial or intermittent stream, lake, pond or other surface water need to be managed to:
  - Divert clean water flow from upslope fields, pastures, driveways, barn roofs etc. away from the ACA.
  - Direct polluted runoff from the ACA area into a storage facility or treatment system such as a correctly sized and well maintained vegetative buffer or treatment area.
  - Limit animal access to surface waters to only properly implemented livestock crossings. Animals may not have free access to streams adjacent to ACAs.
  - Minimize the size of denuded areas such as sacrifice lots
  - Keep areas where animals congregate, such as feed racks and shade, as far away from a water body as possible.

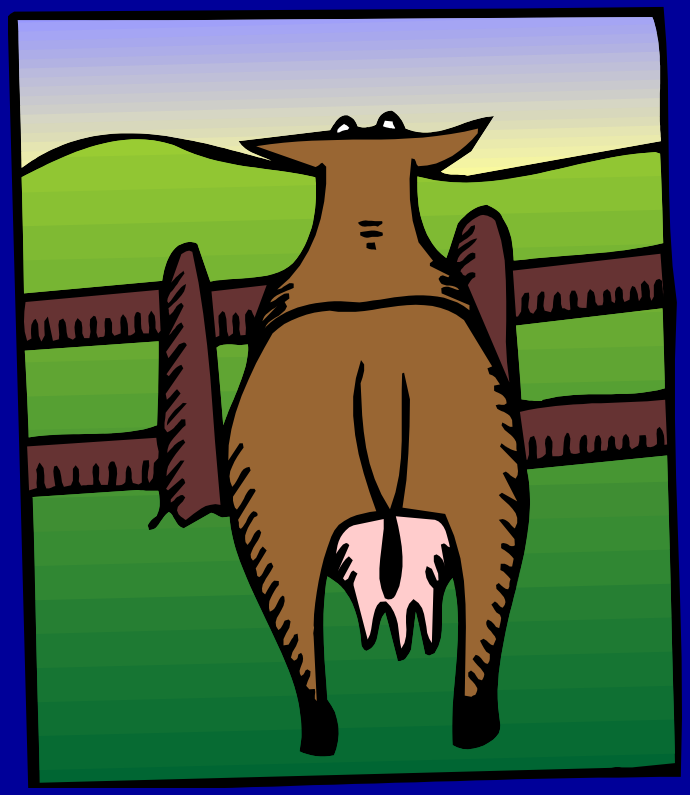
# ACAs

- Farms that have ACAs must address the ACA in the Manure Management Plan.
  - The plan needs to identify Best Management Practices ("BMPs") currently being implemented.
  - A schedule for obtaining assistance to develop and implement additional BMPs that require expert planning, financing, or where additional time is needed.
  - Farmers working with a design professional (conservation district, NRCS, certified nutrient management planner, etc.) can be provided up to 2 years to develop a plan and up to 3 years to implement that plan

# Where do we go from here?

- Draft Document Presented for comment to AAB – June 16, 2010
- Informal Review and Comments
  - Meet w/ AAB, NMAB, PACD, etc.
  - Conservation District review / "test drive"
- Formal DEP Guidance Document Process
  - PA Bulletin Publication
  - 30 – 90 Day Comment Period
  - *Comment & Response* Document

# The End



EASY QUESTIONS?