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Regulatory Analysis Form

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INDEPENDENT REGULATORY
REVIEW COMMISSION

(1) Agency

State Conservation Commission

(2) I.D. Number (Governor's Office Use)

7-390

JCD Number:

2413

(3) Short Title

Revisions to the Nutrient Management Regulations

(4) PA Code Cite

25 Pa. Code, Chapter 83
Subchapter D

(5) Agency Contact & Telephone Numbers

Primary contact person: Douglas A. Goodlander, Director of Nutrient Management, (717) 787-8821

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(6) Type of Rulemaking (check one)

- Proposed Rulemaking
- Final Order Adopting Regulation
- Final Order, Proposed Rulemaking Omitted

(7) Is a 120-Day Emergency Certification Attached?

- No
- Yes: By the Attorney General
- Yes: By the Governor

(8) Briefly explain the regulation in clear and non-technical language.

This final form regulation is provided to bring the program in-line with current scientific and programmatic findings relating to the on-farm loss of nutrients, as recent research has demonstrated a need to revise some of the existing criteria. These final form regulations include revisions to the original proposed regulations published in August of 2004. These revisions were developed in response to the comments received on the August 2004 proposed regulations. These revisions will allow the Commission to more effectively address nutrient losses from high-density animal operations, with minimal negative financial impact on the industry. The major revisions included in this proposal will provide the Commission with increased oversight on phosphorus losses from high-density livestock and poultry operations through the use of a phosphorus index, and increased oversight of the application of manure exported from these animal facilities. These revisions will also provide better clarification of the Commission's criteria for addressing various nutrient management issues on regulated animal operations and ensure that all high-density animal operations managing livestock or poultry are appropriately and consistently addressed through this regulation.

(9) State the statutory authority for the regulation and any relevant state or federal court decisions.

Section 504(1) of Act 38 of 2005, (3 P.S. §504(1)); Section 4 of the Conservation District Law (3 P.S. § 852); Section 503(d) of the Conservation and Natural Resources Act, (71 P.S. §1340.503(d)); May 12, 2004 Environmental Hearing ruling concerning Stephanie Adam, et al. v. State Conservation Commission, docket number 2002189.

(10) Is the regulation mandated by any federal or state law or court order, or federal regulation? If yes, cite the specific law, case or regulation, and any deadlines for action.

Yes. These regulations are required by Pennsylvania Act 38 of 2005 (3 P.S. §§ 501 – 522). The definition of a Concentrated Animal Operation (CAO) defined under the Act, is required to be revisited and revised through regulations if necessary, within five years of the October 1, 1997 effective date. The CAO definition has been revisited during the completion of these final form regulations and the final form regulation addresses this issue.

(11) Explain the compelling public interest that justifies the regulation. What is the problem it addresses?

The implementation of these revisions to the current State Conservation Commission Nutrient Management regulations is necessary to ensure that the program requirements appropriately address the latest scientific understanding concerning on-farm nutrient losses, and to address programmatic issues of concern raised about the current program. This proposal is a key component of Pennsylvania's efforts to ensure the industry trend toward higher intensity animal operations referred to as Concentrated Animal Operations (CAOs) does not negatively impact Pennsylvania's water quality. This final form regulation has been developed addressing the comments received on the Commission's August 2004 proposed regulations.

The current Commission Nutrient Management program addresses approximately 13.3 million tons of manure, which is approximately 51% of all the manure generated in the Commonwealth. This equates to over 174 million pounds of nitrogen and 158 million pounds of phosphorus. The mismanagement of these manure nutrients could create a significant impact on the quality of the water resources in this region of the country. This program is designed and implemented to ensure these manure nutrients are stored, handled and applied in an environmentally sound manner to protect water quality.

(12) State the public health, safety, environmental or general welfare risks associated with non-regulation.

These final form regulations were developed by the Commission with the assistance of the Nutrient Management Advisory Board, to ensure that water quality is not negatively impacted by nutrient pollution coming from CAOs. This is a critical issue in the Commonwealth as these high-density animal operations become more commonplace in Pennsylvania. Protecting water quality is key to protecting public health and the environment. These proposed revisions will provide the necessary program enhancements to protect water quality in regards to nutrient management activities carried out by high-density animal operations.

(13) Describe who will benefit from the regulation. (Quantify the benefits as completely as possible and approximate the number of people who will benefit.)

Farmers will benefit from this proposal by establishing refined nutrient management planning criteria that will further enhance their ability to protect the quality of water used on their operations. This proposal will assist the current 901 CAO operations, and the approximately 500 additional CAOs that will be brought into the program through the revised regulations, in enhancing their water quality protection efforts and give further credibility to their actions to protect local and regional water resources. The additional 1,325 farmers who have voluntarily participated under the current regulations in order to protect water quality will capitalize from the similar water quality and environmental credibility benefits afforded to CAOs under this regulation. These refined regulations will assist farmers in their efforts to effectively utilize nutrient resources on their operations. The final form regulations provides for enhanced financial assistance efforts to further assist the farm community in addressing water quality issues on their operations.

The current Commission Nutrient Management program addresses approximately 13.3 million tons of manure,

which is approximately 51% of all the manure generated in the Commonwealth. This equates to over 174 million pounds of nitrogen and 158 million pounds of phosphorus. This proposal will refine our planning and implementation criteria to provide the necessary direction to these farmers to assist them in improving their current environmental protection efforts in their utilization of this important nutrient resource as well as commercial fertilizers used on the operation.

Citizens of Pennsylvania will benefit from this proposal as they rely on a clean water supply to meet personal and industrial water needs. These program improvements will further protect and improve our Commonwealth's water resources thus ensuring a strong economic future for Pennsylvania's industries including the agricultural industry and the significant tourism industry.

Lastly, this proposal will strengthen the Commonwealth's efforts to support and implement alternative manure technologies to assist various regions of our state in addressing areas of nutrient overload. This effort is core to the Commonwealth's efforts to provide long-term sustainability for the agricultural industry, and a long-term and integrated effort to protect water resources in Pennsylvania.

(14) Describe who will be adversely affected by the regulation. (Quantify the adverse effects as completely as possible and approximate the number of people who will be adversely affected.)

This proposal will define some animal operations that were not originally defined as CAOs, as CAOs regulated under the Nutrient Management Act. Therefore, these newly defined CAOs will be required to develop and implement an approved nutrient management plan. These new farms coming into the program will primarily be larger-scale horse operations that meet the animal density threshold of 2 AEUs per acre. These farms are to be supported in their regulatory compliance efforts similar to those farms that are currently defined as CAOs. This support comes in the way of educational and technical support provided to these individuals as well as financial assistance funding for the development and implementation of their nutrient management plans. An estimated 500 additional operations are expected to will fall under the new CAO definition provided in these revisions.

This proposal will affect the current regulated community (901 CAOs), requiring them to update their current nutrient management plans (consistent with their current plan update timeframe) to incorporate the new criteria included in these revisions. The Commission is budgeting funds to help offset the cost of these plan updates for the regulated community. Also, a portion of our current CAOs may need to find additional land to export their manure, or other alternative uses for the manure they produce, due to the phosphorus index restricting manure application on fields identified as having a high likelihood of phosphorus loss to surface water bodies. The Commission is looking to allocate funding to support alternative utilization or processing options for farmers to assist them in meeting this need. Some of the current CAOs may also need to find additional importing acres, or other alternative uses for the manure they produce, due to the new manure application setback and buffer requirements established in Act 38 of 2005, which address the home operation as well as importing lands. Implementing the phosphorus index or developing an approved nutrient management plan for importing sites can minimize these setbacks. Nutrient planning and phosphorus indexing efforts for importing operations may be financially supported under this program.

This proposal will ensure that those individuals or companies that commercially transport, apply or broker manure from CAOs and volunteer operations, meet the certification requirements to be implemented by the Pennsylvania Department of Agriculture. This certification program will ensure these manure application professionals are knowledgeable and follow proper handling, application and record keeping criteria established under the Department of Agriculture's certification program. There are already 173 persons who voluntarily came forward and have met similar requirements through a Commission supported effort. This demonstrates the industry's willingness to meet this requirement and their desire to have the increased public credibility this process will provide them. The Pa Department of Agriculture and Penn State will provide training and testing to the industry to meet these requirements. There are estimated to be 300 to 500 of these individuals currently in Pennsylvania.

(15) List the persons, groups or entities that will be required to comply with the regulation. (Approximate the number of people who will be required to comply.)

This proposal will affect the current 901 CAOs. The proposal will also affect an additional 500 operations anticipated to fall under the revised CAO definition. The proposal will affect any new CAO operation coming into Pennsylvania. This proposal may affect any of the remaining 59,000 Pennsylvania farmers who wish to voluntarily comply with the provisions of this act, or who choose to import manure from the CAOs.

(16) Describe the communications with and input from the public in the development and drafting of the regulation. List the persons and/or groups who were involved, if applicable.

The State Conservation Commission relied on input from the 66 county conservation districts involved with the program at the local level. The conservation district staff and directors represent individuals with various backgrounds from all areas of the Commonwealth. The conservation districts provided important guidance to the Commission concerning the effectiveness of the current regulations and where they saw the need for programmatic refinements to ensure program effectiveness and on-farm practicality.

An Interagency Nutrient Management Act Workgroup, comprised of staff from DEP, PDA, SCC, PSU, USDA NRCS, USDA ARS, and conservation districts met numerous times over the course of six months to review all the input and comments provided on the proposed regulations and to formulate draft revisions to the proposed regulations for consideration by the Nutrient Management Advisory Board and the State Conservation Commission.

The 15-member Nutrient Management Advisory Board worked for three years providing input to the Commission in the development of these final form revised program criteria. The Advisory Board has reviewed the substantive revisions in this proposal and have provided their recommendations and guidance to the Commission in the development of the final form regulations. This Advisory Board is established by the Act to provide public direction to the Commission in the development of program regulations and is comprised of representatives from the poultry and livestock industries, veterinary science, the environmental community, academia, water quality professionals, private non-farmer citizens, and local government.

The Commission met with various farm organizations, citizens groups, environmental organizations, and industry groups to describe the various issues considered for revision and to extract input from these groups. The proposal presented here is an effort of the Commission to develop a program that incorporates the sometimes conflicting input from these groups to advance the program by incorporating necessary enhancements for water quality protection in a manner that is cost effective and practical for the agriculture industry.

The Commission held two public meetings and two public hearings where the Commission, along with its program partners, described the elements of the proposed regulation to the interested public and accepted testimony concerning the proposed revisions. The Commission also provided a 90-day comment period for the public to provide comments on the various elements of the proposed regulations. The testimony presented at the public hearings, along with the comments from all those that provided written comments, have been discussed with the Nutrient Management Advisory Board and the Commission, in the development of the final form regulations.

(17) Provide a specific estimate of the costs and/or savings to the regulated community associated with compliance, including any legal, accounting or consulting procedures that may be required.

The enhanced planning criteria outlined in the final form regulation is expected to result in an increase in the cost for developing a nutrient management plan. The average cost of a plan prior to implementing the

Phosphorus Indexing and importer Nutrient Balance Sheet requirements was \$938.00. Incorporating the new criteria into these Nitrogen based plans is estimated to cost an additional \$850 per CAO (to address phosphorus, importer Nutrient Balance Sheets, etc.). The Commission is planning to provide cost share assistance to farmers to offset the cost of updating the current approved plans to meet the new standards. With 75% state cost share, the additional cost to a farmer to update a current CAO plan would be \$212 per CAO (\$850 total cost, \$638 state cost share, \$212 farmer cost). There are currently 901 CAOs in Pennsylvania; therefore, this would calculate to a total increase cost of \$191,000 for the existing 901 CAOs to develop their required plan updates over a three-year time frame.

The final form regulation will bring additional farms into the CAO category. These newly regulated farms will primarily be larger-scale horse operations. These new CAOs will be required to develop and implement nutrient management plans. These operations are commonly less cropland extensive in nature and generally have less complexity relating to the management of manure on the farm; therefore, their planning costs are expected to be less than the cost of an average nutrient management plan. Based on past program experience, the estimated cost of developing a plan for these newly defined operations will be approximately \$800. This would translate into a total cost of \$400,000 to develop nutrient management plans for the 500 newly defined CAOs. This regulation continues to provide a cost share program to offset the planning cost for CAOs. With 75% state cost share, the final cost per new CAO would be \$200 (\$800 total cost, \$600 cost share, \$200 farmer cost). This would calculate to a total cost of \$100,000 for the 500 newly defined CAOs to develop their required plans over a two-year time frame.

The criteria included in the final form regulations will necessitate operators to make annual adjustments to their approved plan due to the shift to phosphorus management. This will add an additional plan maintenance cost to the operators, which is expected to cost approximately \$400 a farm annually. The Commission will begin implementing the Plan Maintenance Program (PMP) to assist operators in keeping their plans current. Assuming that 1,000 plans will be written on an annual basis, and that this effort will be 75% cost shared, this will cost farmers 100,000 a year. This requirement is expected to begin to affect farmers in the second year after the revised regulations go into effect and take until the fourth year following the effective date, to become fully implemented.

The final form regulations will require an estimated 60% of our existing CAOs (540 CAOs) to export some increased portion of their generated manure due to the phosphorus index element of the revised regulations identifying certain fields as a high risk of phosphorus loss to surface water bodies, and due to revised setback requirements as required in Act 38 of 2005. Approximately 30% of these CAOs (162 CAOs) will be able to recoup the cost of transportation of the manure from those operators receiving the manure. The remaining farmers needing to transport additional manure from their farm sites (378 CAOs) will have to pay manure transportation costs to export the additional excess manure to appropriate sites. The cost per operation needing to export additional excess manure is estimated to be \$1,500 annually, with a total annual cost to the regulated community of \$567,000. This expense will be phased in over the next three years due to the three-year lifespan of existing nutrient management plans (FY +1 \$189,000; FY +2 \$378,000; FY +3 \$567,000). The Commission is proposing to assist the existing regulated community to meet this financial burden by supporting alternative manure processing or utilization technologies which will economically utilize the manure on site or at a manure processing facility in an environmentally sound manner. Therefore, starting on FY +4 the Commission would expect operators to begin to implement alternative technologies reducing this farmer expense at the rate of an additional 10% each year (i.e. 10% reduction in FY +4, 20% in FY +5, etc.).

In addition, these 540 farmers needing to ship manure off site will need to purchase additional nitrogen chemical fertilizer to replace the nitrogen that used to be supplied by the manure that they are now required to ship off site because of the phosphorus limitations in their plans. Based on our program records, the average CAO farm size is 94 acres. Based on a compilation of the data from the last 4 years' Pennsylvania Agricultural Statistics books, 115 bushels of corn per acre is a reasonable average for corn grown across the state. Assuming that 60% of the land on a CAO is corn ground, and seeing that CAOs exporting all their manure will need to purchase chemical

nitrogen to meet this corn need, a CAO exporting all of their manure will need to purchase 7,000 lbs of nitrogen to meet the nitrogen need of the corn crop on their individual farm. At the current price of 37 cents a pound for nitrogen, it will cost these CAOs approximately \$2,600 per farm to purchase this nitrogen. Therefore, these 540 CAOs exporting all their manure will incur an additional production cost of \$1,400,000 annually once they update their nutrient management plan to include the new P Index requirement. The final form regulations include a five-year P Index phase-in period which will extend the time when these existing farms will need to fully implement restrictions under the P Index. Therefore, these farms will only need to purchase two-thirds of the nitrogen explained above for the first five years of implementing these revised regulations, so that the average cost per farm would be reduced to \$1,700 with a total annual cost of \$920,000 to the regulated community for the first five years. This expense will be phased in over the next three years due to the three-year lifespan of existing nitrogen based nutrient management plans (FY +1 \$307,000; FY +2 \$614,000; FY +3 \$920,000). The Commission is proposing to assist the existing regulated community to meet this financial burden by funding alternative manure processing or utilization technologies to allow manure nitrogen to be applied to the home farm. Therefore, starting on FY +4 the Commission would expect operators to begin to implement alternative technologies reducing this farmer expense at the rate of an additional 10% a year (i.e. 10% reduction in FY +4, 20% in FY +5, etc.).

The final form regulation will include increased criteria relating to phosphorus management, fall and winter application restrictions, and field stacking criteria. In order to address these issues some poultry farmers will find it necessary to construct manure storage facilities on site to properly store their manure until it can be applied to fields consistent with the final form criteria. Dry manure storage facilities are expected to be constructed on 250 farms, at the cost of \$40,000 per farm. Of this total cost, 50% is expected to be funded through the Nutrient Management Grants program, 25% from federal funding programs, leaving 25% to be funded by the regulated CAOs. This equates to a total of \$2.5 million to be spent by the CAO operators, spread out over the next six years.

The proposed revisions will induce farmers to install conservation practices at a faster rate in order to reduce their phosphorus index values for their farm fields and to address the manure management controls required for animal concentration areas (barnyards and feedlots). This conservation work will be consistent with those practices in their current Erosion and Sedimentation Control Plans and the Pennsylvania Manure Management Manual, as required by existing DEP regulations, and therefore no additional costs over what is currently required under existing regulations are anticipated for these efforts.

(18) Provide a specific estimate of the costs and/or savings to local governments associated with compliance, including any legal, accounting or consulting procedures that may be required.

There is an expected substantial decrease in the cost to local municipalities for water treatment efforts as these revised regulations will further protect the local water resources administered by local governments. For instance, there are about 100 public water suppliers in Lancaster County alone that apply treatment processes to remove excess nutrients from their water supplies. Costs to public water suppliers for the treatment of contaminated water can run well over \$1.0 million for a single municipality. The revised criteria in this proposal will further protect these resources from nutrient contamination; therefore, decreasing or eliminating local water treatment costs.

Local governments in an increasing number of areas of the state are being challenged to provide additional nutrient management requirements (often times relating to phosphorus and exported manure) on these high intensity animal operations that the Nutrient Management Act regulates. These local governments have in a number of instances developed additional criteria and incorporated these requirements into local ordinances in order to address a public concern in their area. The revised criteria in this proposal will provide local governments with the water quality criteria that they are being challenged to add at the local level, thus reducing the pressure on them to develop additional local ordinances and their likelihood of litigation concerning the legality of their local ordinances given the local ordinance preemption clause included in Act 38 of 2005. This

will reduce local government legal costs to an extent that cannot be estimated with any degree of certainty.

(19) Provide a specific estimate of the costs and/or savings to state government associated with the implementation of the regulation, including any legal, accounting, or consulting procedures that may be required.

State government will need to provide additional funding to the Plan Development Incentives Program (PDIP) which has provided cost share funding to farmers for the development of nutrient management plans since 1997. This funding effort is essential to ensure that farmers are not negatively impacted by these enhanced planning and CAO identification requirements. The current 901 CAOs will all need to revise their plans in order to meet the new criteria in the final form regulations. These CAOs are to be supported through the PDIP program. Plan revisions will cost operators an additional \$850 per CAO plan over the average cost prior to the implementation of the new requirements. At 75% cost share, and 901 plans to update, this will equate to \$575,000 in PDIP funding spread out over the first three years of final form regulation implementation. The final form regulation also identifies horse operations as newly required to meet these planning requirements. Planning costs for these horse operations is expected to be \$800 per farm. At 75% cost share for 500 new horse CAOs, this will equate to \$300,000 in PDIP funding over the first two years after the final form regulations become effective.

The final form regulation provides for funding to assist the regulated community to maintain their approved plan recognizing that the shift to phosphorus management has required to the development of more year-specific plans that need frequent updates in order to maintain compliance. Annual plan updates are expected to cost \$400 per CAO. At 75% cost share for 1,000 plans requiring annual updates, this will equate to \$300,000 per year program costs. This program is expected to begin in the second year after the revised regulations go into affect and take until the fourth year following the effective date, to become fully implemented.

State government will need to continue to provide financial resources to the regulated farm community to help offset the costs of implementing the practices in their approved nutrient management plans. Without this assistance many farmers will find it impossible to implement these required practices given the present farm economy. The revised regulations will require some operations to build new manure storage facilities (especially poultry operations) in order to meet the new phosphorus planning standards as well as winter and fall application restrictions and the new field stacking restrictions. The state funding needed to provide financial assistance to assist the regulated community in implementing these practices is estimated to be \$5.0 million for manure storage construction. This increased implementation cost will be spread out over the first six years of implementing the revised regulations.

The final form regulations also allow for the implementation of a cover crop support program, to fund those operators who plant cover crops to meet the new fall application restrictions included in the final form regulations. This cover crop program is expected to be funded at the rate of \$150,000 per year to support CAO efforts to install cover crops on their corn silage fields.

State government will need to provide increased funding to county conservation districts who provide necessary local administration of the program and oversight of the regulated community. Conservation districts will need to hire additional staff to enhance their program administrative and oversight efforts due to the increased program criteria and oversight of an expanding regulated community. This local level involvement and commitment to assisting the Commonwealth in its implementation of this program has provided for the success of this important water quality program. This current year the Commission allocated \$2.3 million to conservation districts to provide local administration of the program. Completion of hiring and training additional conservation district staff to carry out enhanced plan review and compliance efforts imposed as a result of these regulatory revisions will require an additional \$200,000 annually to conservation districts to bring on the additional locally based program staff.

The final additional state government cost will be for increased Commission staff needs to address the expanded

program under the revised regulations. There will be a need for two additional program specialists at the Commission office to help oversee the implementation of the new requirements, especially those related to the horse industry. The cost for these additional positions is estimated to be \$120,000 annually. This cost has been factored into the Commission's current FY 2005-06 budget figures included in this document.

(20) In the table below, provide an estimate of the fiscal savings and costs associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.

	Current FY Year	FY +1 Year	FY +2 Year	FY +3 Year	FY +4 Year	FY +5 Year
SAVINGS:	NA	NA	NA	NA	NA	NA
Regulated Community	NA	NA	NA	NA	NA	NA
Local Government ¹	NA	NA	NA	NA	NA	NA
State Government	NA	NA	NA	NA	NA	NA
Total Savings	NA	NA	NA	NA	NA	NA
COSTS:	NA	NA	NA	NA	NA	NA
Regulated Community ²	NA	1,026,000	1,556,000	2,034,000	1,855,000	1,707,000
Local Government	NA	NA	NA	NA	NA	NA
State Government ³	NA	1,495,000	1,745,000	1,695,000	1,603,000	1,603,000
Total Costs	NA	2,521,000	3,301,000	3,729,000	3,458,000	3,310,000
REVENUE LOSSES:	NA	NA	NA	NA	NA	NA
Regulated Community	NA	NA	NA	NA	NA	NA
Local Government	NA	NA	NA	NA	NA	NA
State Government	NA	NA	NA	NA	NA	NA
Total Revenue Losses	NA	NA	NA	NA	NA	NA

(20a) Explain how the cost estimates listed above were derived.

¹ Savings to local governments are not able to be quantified but are expected to be substantial as the final form regulations further the Commonwealth's efforts to prevent agriculture related nutrient pollution to water resources administered by the local government. The pollution prevention efforts called for under this proposal will assist local governments in reducing costs associated with applying treatment processes to remove excess nutrients from drinking water.

² The 901 existing CAOs will be required to update their nutrient management plans to meet the new program criteria incorporated into this proposal. The regulated community is expected to incur an increased cost of \$191,000 spread out over the next 3 years to develop these revised plans (total additional cost per operation to incorporate the new provisions is estimated to be \$850, of which \$638 would be provided through the Commission's cost share program, and \$212 would be paid for by the producer). The financial assistance program providing assistance for this effort would be the Commission's existing Plan Development Incentives Program (PDIP) provided for in these regulations.

Approximately 250 existing CAOs (primarily poultry operations) are anticipated to need additional manure storage facilities in order to address the revised manure application, manure stacking and exporting criteria. Assuming a \$40,000 total cost per operation to install this practice on these poultry CAOs, the cost to the regulated community (assuming 50% of these costs will be addressed through state financial assistance programs and 25% from federal funding sources) is \$2.5 million spread out over a six-year period.

The final form regulations will require an additional plan maintenance expenditure to the operators, which is expected to cost approximately \$400 a farm annually. The Commission will implement the Plan Maintenance Program (PMP) to assist operators in keeping their plans current. Assuming that 1,000 plans will be written on an annual basis, and that this effort will be 75% cost shared, this will cost the 1,000 affected farmers \$100,000 a year. This requirement is expected to begin to affect farmers in the second year after the revised regulations go into effect and take until the fourth year following the effective date, to become fully implemented.

Based on the proposed revised manure application and exporting criteria, approximately 540 existing CAOs are anticipated to incur additional manure transportation expenses for their operations, of which 328 of these are not anticipated to be able to recoup these increased manure exporting costs through the marketing of the manure. This increased annual operational cost is anticipated to be approximately \$1,500 per affected CAO with a total estimated cost to the industry annually of \$567,000. The Commission is proposing to assist the existing regulated community to meet this financial burden by funding alternative manure processing or utilization technologies and industries to effectively and economically utilize the manure on site in an environmentally sound manner. An additional annual cost of \$920,000 is anticipated for the 540 CAOs exporting all their manure to fund the purchase of nitrogen fertilizer to grow their crops. Again, the alternative manure technology efforts will bring this cost down over time.

There will be an estimated 500 new CAOs (primarily larger-scale horse operations) incorporated into the program due to the revised CAO definition criteria included in this proposal. These new CAOs will be required to develop a nutrient management plan under the Act. Plans for these operations are anticipated to cost approximately \$800 per farm, of which the Commission's PDIP program will provide 75% assistance, or \$600; therefore, the remaining \$200 would be a cost to the CAO. Costs to this entire sector of the animal industry is estimated to be \$100,000 spread out over the first two years of implementing the revised regulations.

³ State costs included above include:

\$200,000 annually (over the current year expenditure) to provide the necessary additional staff resources to the conservation districts to carry out the additional program criteria outlined in the proposal.

\$120,000 annually (currently included in the Commission's FY 2005-06 program budget) to provide two additional staff positions at the Commission office to address the increased work effort needed to administer and enforce the revised regulations and newly defined CAOs.

\$300,000 spread out over two years, to provide additional funding through the Plan Development Incentives Program to cost share the development of plans on new horse CAOs.

\$575,000 spread out over three years, to provide additional funding through the Plan Development Incentives Program to cost share the amendment of existing CAOs plans in order to meet the revised criteria in the final form regulation.

\$5,000,000 spread out over six years, to provide additional cost share funding to currently defined CAOs for the implementation of new manure storage facilities required under the revised regulations.

\$300,000 annually beginning the second year after the regulations (and building up to the fourth year after the effective date of the regulations: FY +2 \$100,000; FY +3 \$200,000; FY +4 \$300,000), to provide cost share funding to CAOs to maintain their plans.

\$150,000 annually beginning the second year after the regulations go into effect, to provide cost share funding to farmers newly required to plant cover crops on their fields where fall manure will be applied.

(20b) Provide the past three-year expenditure history for programs affected by the regulation.

Program	FY -3 (2002-03)	FY -2 (2003-04)	FY -1 (2004-05)	Current FY (2005-06)
DEP (NM Fund): Education, research, and technical assistance	\$1,245,000	\$1,788,000	\$2,201,000	\$2,300,000
PDA (NM Fund): Planning, loans, grants, and technical assistance	\$4,136,000	\$4,852,000	\$2,645,000	\$2,745,000
PDA (NM Fund): Nutrient Management - Administration	\$248,000	\$254,000	\$231,000	\$327,000

(21) Using the cost-benefit information provided above, explain how the benefits of the regulation outweigh the adverse effects and costs.

Clean water is essential to the agricultural industry as well as Pennsylvania's other many industries and all of Pennsylvania's citizens. Recreation and tourism in Pennsylvania are some of the other major industries in Pennsylvania and they remain strongly dependent upon clean water. For water supplies, it is less expensive to protect the quality of the water source than it is to attempt to treat it once it is contaminated.

The improved efficiency of proper nutrient management often times translates into a reduction in farm expenses and therefore an increase in farm profitability.

The financial assistance programs offered by the Commission to assist the regulated community will minimize the cost of regulatory compliance to the regulated community. These include programs to assist with BMPs installation, plan development, plan maintenance, cover crop planting, and alternative technologies implementation.

The expansion of the animal industry is being challenged across the state due to public concern that this growth will have a negative impact on the environment of Pennsylvania. The provisions of this final form regulation will further the Commonwealth's efforts to ensure that these operations are protective of water quality and will therefore address the water quality concerns of the public associated with the expansion of the animal industry in Pennsylvania. This will allow farming operations to expand in order to allow for their economic sustainability and therefore the sustainability of the industry in Pennsylvania.

The sustainability of the agricultural industry is increasingly dependent on the industry's ability to co-exist with its non-agricultural neighbors. The requirements imposed through these revised regulations are practical for the industry to implement and will help ensure the ability of the agricultural industry to co-exist with its neighbors and are therefore critical to the long-term sustainability of the agricultural and agricultural tourism industries, which are the two leading industries in Pennsylvania's economy.

(22) Describe the nonregulatory alternatives considered and the costs associated with those alternatives. Provide the reasons for their dismissal.

These regulations are required under Act 38 of 2005. These final form revisions refine and enhance the initial efforts of the Commission to address the requirement to provide regulations to implement the Act.

The provisions established under these regulations are only required of a small segment of the agricultural industry. This small portion of the industry is considered to have a higher potential for nutrient losses from their operations, as opposed to operations of a lower animal density, which are not regulated under this Act. The public is very interested and has often expressed the desire for the state to increase its regulatory pressure on this portion of the animal industry. To address this issue without regulatory authority would minimize the implementation of these proven criteria on high animal density operations and would prompt local municipalities to take on this effort themselves which would mean very inconsistent and possibly inappropriate and ineffective criteria throughout the state. These final form regulations are necessary to address the latest in scientific understanding of nutrient loss from farm operations and are necessary to ensure that the current regulations are effective in addressing nutrient losses from high density animal operations.

The remaining, non-CAO portion of the agricultural industry, which represents the vast majority of that industry, is encouraged to voluntarily follow the criteria established under this Act which provides technical and financial support to these volunteer farmers and also by providing limited liability protection under the Act for all farmers implementing an approved plan under the Act. The non-CAO community obviously has a keen interest in participating in this program based on the 1,300 farmers that have voluntarily agreed to participate in the program.

Through the efforts of this program the Commission has actively overseen the storage, handling and application of over 13.3 million tons of manure, which is more than 51% of all the manure produced in Pennsylvania. Due to the program focus directed to the larger scale operations, the Commission was able to address this significant portion of the manure produced in the state by only affecting 8% of all the farms in Pennsylvania.

Educational efforts are a key component of maximizing the effect of this program, on all farms, in all areas of the state. Pennsylvania's Nutrient Management Act educational program provides excellent direction to all farmers in the proper use of manure and fertilizer nutrients thus maximizing the benefit of this pollution prevention program.

(23) Describe alternative regulatory schemes considered and the costs associated with those schemes. Provide the reasons for their dismissal.

The Nutrient Management Advisory Board considered numerous options to address the improved understanding of nutrient losses from farms. The Advisory Board spent over three years considering the various options and formulating the revisions provided in the final form regulations. The proposal presented here attempts to provide maximum flexibility to the regulated community to address nutrient loss issues on their farms. This flexibility will ensure the industry's ability to successfully meet the water quality protection goal of the Act.

(24) Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulation.

These regulations have no counterpart at the federal level. The most comparable regulation at the federal level is EPA's Concentrated Animal Feeding Operation (CAFO) program under 40 CFR Part 122, which has been recently revised through new federal regulations. The federal CAFO program requirements are based on animal numbers and Pennsylvania's Nutrient Management Act requirements are based on animal density. Pennsylvania's animal density criteria is effective in defining those operations most likely to have nutrient management issues on their operations and is therefore the preferred criteria over the federal animal numbers criteria. Pennsylvania's DEP, through delegation with EPA, implements the federal CAFO permitting requirements for CAFO farms in Pennsylvania and DEP is proposing to continue to use these Chapter 83 requirements to serve as the technical criteria for these federally regulated farms, as DEP has done for the past

4 years. Therefore, it is critical that the Commission's nutrient management criteria continue to be consistent with the CAFO criteria (as is provided under this final form regulation) to allow for this program coordination, which has made these programs a success in Pennsylvania.

This proposal includes a phosphorus provision which is consistent with EPA's new regulatory requirements for CAFOs and the Pennsylvania USDA NRCS nutrient management planning standard. NRCS currently requires Pennsylvania farmers to develop and implement a phosphorus indexed nutrient management plan in order to receive federal funding or federal technical assistance for the installation of manure management practices.

The other major revision included in this final form regulation is the inclusion of Nutrient Balance Sheets for importing operations. This new provision addresses exported manure consistent with Pennsylvania's current CAFO program requirements that require nutrient balance sheets and signed agreements for these federally regulated farms.

(25) How does this regulation compare with those of other states? Will the regulation put Pennsylvania at a competitive disadvantage with other states?

Nutrient Management program technical criteria are very similar in the various states throughout the nation under the direction of EPA as well as regional scientific workgroups. The EPA CAFO regulations have established base nutrient management program requirements for all states throughout the nation which are similar to those included in this final form regulation, including the phosphorus index provision.

States throughout the nation generally require the limitation of manure applications based on crop removal of nitrogen and some form of accounting through the plan for the loss of phosphorus. Pennsylvania's phosphorus index has been developed by nationally recognized experts at Penn State and the USDA Agricultural Research Service to ensure that it will provide important water quality benefits using a flexible format that will be practical for the farm community to implement. Pennsylvania soil scientists have worked with the soil scientists from our surrounding states to ensure that phosphorus index results from all of the states in this region of the country are consistent in their requirements on the assessed fields.

EPA CAFO regulations have directed all states to require manure application setbacks for regulated farms. All the states in this region of the country, including Pennsylvania, are providing for the setbacks. The final form regulations address manure application setbacks consistent with the EPA direction given to all states.

The revised exported manure requirement in this final form regulation provides additional flexibility for farmers in comparison to programs in our neighboring states of Delaware and Maryland. In these neighboring states, all farmers are required to have a phosphorus based nutrient management plan, therefore importers would be required to have a complete nutrient management plan for their operations. In Pennsylvania we are proposing to require either nutrient balance sheets or a nutrient management plan for these importing operations. This will provide additional flexibility to the regulated community while still addressing the need to properly utilize and track the manure exported from regulated operations.

The provisions in this final form regulation will provide for a more sustainable agricultural industry in Pennsylvania which is key to making for a strong and competitive industry today and into the future. These provisions in this proposal will ensure the farm community can continue to operate economically and still maintain proper water quality in Pennsylvania.

(26) Will the regulation affect existing or proposed regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.

This proposal is a revision to the current Nutrient Management Act regulations found in 25 Pa. Code. §§ 83.201 - 83.461. This proposal will also affect the Commission's financial assistance programs developed to assist

animal operations in complying with the law.

The Pennsylvania Department of Agriculture has developed a Nutrient Management Specialist certification program under 7 Pa. Code §§ 130b.1 – 130b.51. This proposal will affect the activities of those certified specialists certified under the PDA program.

The Pennsylvania Department of Agriculture is developing a Manure Hauler and Broker certification program under 7 Pa. Code §§130e.1 – 130e.7. This proposal will coordinate with the activities of those certified specialists certified under the PDA program.

These regulations continue to contain provisions that affect operations found to be in violation of the Clean Streams Law, possibly requiring them to develop and implement nutrient management plans meeting the requirements of this Act. These regulations are written to coordinate with DEP rules and regulations pertaining to all operations utilizing manure (25 Pa. Code § 91.36) and operations required to obtain a federal NPDES CAFO permit (25 Pa. Code §§ 92.1, 92.5a).

(27) Will any public hearings or informational meetings be scheduled? Please provide the dates, times, and locations, if available.

The Commission anticipates holding two informational meetings soon after the publication of the final form regulation. There is anticipated to be one meeting in the Lancaster Farm and Home Center and the other meeting is anticipated to be held in an area more accessible to the western portion of the state. These informational meetings will be held from 7:00 p.m. to 9:00 p.m. and will include an opportunity for questions from the audience.

(28) Will the regulation change existing reporting, record keeping, or other paperwork requirements? Describe the changes and attach copies of forms or reports which will be required as a result of implementation, if available.

The existing regulations require records to be submitted documenting the adherence to certain manure exporting scenarios. Under the final form regulation this submission of records to the county conservation district or the Commission will no longer be required due to the program's newly implemented annual CAO inspection where these records are reviewed at the farm level by program staff.

Records relating to the export of manure by a certified manure hauler or broker will be available on site to program staff on inspection to ensure that proper application rates and methods have been used for manure generated on CAOs. These records will include the date of application, application areas, observation of setback distances, application method, and application rate.

The revised regulations will require Manure Export Sheets as well as the above exported manure record keeping requirements to be used for farms voluntarily complying with regulations as well as CAOs, where in the past this record keeping requirement only pertained to CAOs. Even though this record keeping requirement has been added to the non-CAO sector of the agricultural community, the Commission does not expect that this new volunteer requirement to be a significant hardship because, based on the Commission's records of the current 1,300 volunteers in Pennsylvania's program, only 3% of the manure generated on non-CAO operations is exported off of the operation where it is produced.

The revised regulations will require the engineer that is designing a manure storage on a CAO or volunteer, to submit to the conservation district or Commission, a verification that the design has been completed properly and a construction inspection schedule that will be followed during construction, at least two weeks prior to construction.

The revised regulations will require the operator to submit a copy of the phosphorus index data spreadsheet with the nutrient management plan in order to document the phosphorus index figures used in the plan. The USDA Agricultural Research Service has developed and is providing to specialists, a computer program to assist planners with the development of the phosphorus index and in the generation of the phosphorus index data spreadsheet needed for the plan.

The final form regulations require that soil test records for the operation be submitted with the plan to ensure that the plan properly reflects the nutrient levels in the soil.

The final form regulation calls for the development of an Emergency Response Plan (ERP) to outline actions to be taken by program participants in the event of a leak or spill of manure at the operation. These ERPs are not required to be submitted with the nutrient management plan but are to be available on site to be implemented if necessary. The nutrient management plan is required to include a verification that the ERP has been developed and is available on site.

(29) Please list any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, elderly, small businesses, and farmers.

Many of the special needs of the regulated community are incorporated into the regulations as a result of the participation of the Nutrient Management Advisory Board in developing the final form regulations. The Board has met for over three years and has been helpful in expressing the needs of the regulated community and finding ways to address those needs through the regulations.

The revisions recognize the need for accommodating the variations in agricultural practices across the Commonwealth and addressing the various animal species raised within Pennsylvania. These revisions provide flexibility in addressing the various approaches to manure management. The regulations are being revised to specifically allow for inclusion of new technological approaches to addressing nutrient management concerns on the farm as these approaches are refined and found to be effective.

The revisions provide for a new approach to address phosphorus loss from farms. This approach is built around providing flexibility to the producer in their efforts to address areas with a high likelihood of phosphorus loss. This phosphorus loss analysis allows farmers to address these areas by possibly either revising their soil runoff control practices, manure application practices or fertilizer application practices in order to address these areas of phosphorus concern.

The final form regulations provide additional flexibility over a five year phase in period for farmers to meet the full extent of the phosphorus index. This is done recognizing the need for certain CAOs to implement alternative technologies to most effectively meet the new phosphorus requirements.

The final form regulations provide additional time for farmers to address the Agricultural Erosion and Sedimentation Control Plan requirement link included in this program. This additional time was provided in response to comments on the initial proposal concerning the backlog of farmers needing these plans, and the shortage of planners available to develop these plans.

The farm economy is such that it is difficult for many farmers to generate sufficient income within the business to afford the various environmental protection practices needed on their farms. The Commission is assisting the industry through financial assistance programs to support their plan writing and plan implementation efforts. The Commission is also looking to provide funding to implement alternative manure markets or technologies available to assist farmers with addressing local and regional nutrient imbalances found in certain parts of the state.

(30) What is the anticipated effective date of the regulation; the date by which compliance with the regulation will be required; and the date by which any required permits, licenses or other approvals must be obtained?

The effective date of the regulations is expected to be July 1, 2006, providing time for the farm community to be properly informed about these program revisions prior to them going into effect.

The newly defined CAOs under this final form regulation are required to submit a plan within two years of the regulations becoming effective. They are required to implement the approved application rates as soon as those plans are approved, and they are required to construct any practices that may be called for in their plan, consistent with the approved implementation schedule in the nutrient management plan but not later than three years after approval of the plan.

The current CAOs are required to update their currently approved plans to incorporate the new criteria, within the three-year plan update schedule currently required in the regulations. The phosphorus index is to be fully phased in by December of 2010. The Agricultural Erosion and Sedimentation Control Plan linkage called for in the final form regulations are to go into effect three years from the effective date of the regulations for existing operations.

Newly proposed CAOs will be required to obtain nutrient management plan approval prior to commencement of the new operation. Operations planning to expand to become a CAO will be required to obtain nutrient management plan approval prior to the planned expansion.

(31) Provide the schedule for continual review of the regulation.

The Commission will continually assess this regulation and make revisions when needed to address any valid technical or procedural concerns that may arise.

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(AGENCY)

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DATE OF ADOPTION: 1/19/06

BY _____

TITLE **KATHLEEN A MCGINTY**
Secretary

EXECUTIVE OFFICER CHAIRMAN OR SECRETARY

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DAVID J. DEURIES

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EXECUTIVE
(Deputy General Counsel)

(Chief Counsel - Independent Agency)
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NOTICE OF FINAL RULEMAKING

DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE CONSERVATION COMMISSION

Nutrient Management

25 Pa. Code, Chapter 83

Notice of Final Rulemaking

Title 25—ENVIRONMENTAL PROTECTION

State Conservation Commission [25 PA. CODE CH. 83] Nutrient Management

The State Conservation Commission (Commission) by this order amends Chapter 83, Subchapter D (relating to nutrient management). These amendments make various changes to existing regulations to improve environmental protection at agricultural operations subject to the act of July 6, 2005 (Act 38 of 2005)(3 Pa. C.S. §§ 501 - 522 (formerly the Nutrient Management Act, 3 P.S. §§ 1701--1718) (hereinafter referred to as "Act 38").

These amendments were adopted by the Commission at the meeting on January 19, 2006.

A. Effective Date

These revisions to the regulations will go into effect October 1, 2006.

B. Contact Person

For further information, contact Karl G. Brown, Executive Secretary, State Conservation Commission, Suite 407, Agriculture Building, 2301 North Cameron Street, Harrisburg, PA 17110, (717) 787-8821. Persons with a disability may use the AT&T Relay Service by calling (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This final-form regulation is available on the Commission's website: <http://www.agriculture.state.pa.us/agriculture/cwp/view.asp?a=3&q=127144> .

C. Statutory Authority

These final-form regulations are promulgated under the authority of Sections 504 and 506(a) of Act 38, 3 Pa. C.S.A. §§ 504 and 506(a), which authorize the Commission to promulgate regulations to make appropriate changes to the criteria used to define a concentrated animal operation, and to establish minimum criteria for nutrient management plans and other requirements necessary to implement Act 38; Section 4 of the Conservation District Law (3 P.S. § 852) which authorizes the Commission to promulgate rules and regulations as may be necessary to carry out its functions; and Section 503(d) of the Conservation and Natural Resources Act (71 P.S. §1340.503(d)) which modified the authority and responsibilities of the Commission, DEP and the Department of Agriculture.

D. Background and Summary

These final-form regulations are the culmination of several years' work administering Act 38 across the Commonwealth, advances in the sciences of agronomics and manure management and revisions to the former Nutrient Management Act, as well as legislative hearings voicing public concerns with livestock agriculture and changes in the industry. Currently, 901 operations are subject to the existing nutrient management regulations in Chapter 83, Subchapter D, and an additional 1,325 farms have voluntarily complied with the requirements.

The predecessor to Act 38, the Nutrient Management Act, was enacted in May 1993 to provide for the management of nutrients on certain agricultural operations to abate nonpoint source pollution. It required the Commission, in conjunction with the Pennsylvania Department of Agriculture (PDA), the Department of Environmental Protection (DEP), the Penn State Cooperative Extension, the Nutrient Management Advisory Board and county conservation districts, to develop a program for the proper utilization and management of nutrients. Act 38 did not change that basic approach. Accordingly, the Commission staff has worked closely with these organizations in developing this final-form regulation.

Nitrogen is identified in Act 38 as the nutrient of primary concern, but it allows for the Commission to address other nutrients pursuant to specific criteria established by the Commission. *See* 3 Pa. C.S.A. § 504(1)(i). This final-form regulation adds another nutrient—phosphorus—to be considered within the development of nutrient management plans under Act 38. That change, along with various provisions relating to the export of manure off of the farms governed by these regulations, were two central issues with the current program identified to the Commission by the House Committee on Agriculture and Rural Affairs, following public hearings in 2001.

The Commission is also required to provide education, technical assistance and financial assistance to the agricultural community regarding proper nutrient management. To date, the Commission has administered over \$1.6 million in financial assistance to farmers subject to the requirements of these regulations.

The Commission developed this final-form regulation in conjunction with the Nutrient Management Advisory Board, as required by Act 38. The Advisory Board, which represents a wide range of agricultural, academic, governmental, environmental, and private interests, provided extensive assistance to the Commission over the past several years in an effort to develop workable and effective revisions to the existing regulations. The development of this final-form regulation was also done with regular assistance and guidance from county conservation districts, PDA, DEP, the USDA Natural Resources Conservation Service, the USDA Agricultural Research Service, and the Penn State College of Agricultural Sciences.

This final-form regulation directly regulates the concentrated animal operations (CAOs) that are required to develop and implement nutrient management plans under Act 38, as well as agricultural operations that volunteer to meet the requirements under the act, referred to as “volunteer agricultural operations (VAOs).” In addition, the regulation’s requirements for CAOs and VAOs also apply to agricultural operations found to be in violation of The Clean Streams Law (35 P. S. § § 691.1—691.1001) if they are required to submit a plan that meets the requirements of Act 38. All of these operations will be collectively referred to as “NMP operations” in this Preamble. Further, this final-form regulation will affect operations that agree to import manure from NMP operations, and others involved in that export such as commercial haulers and brokers. Finally, DEP’s “concentrated animal feeding operation (CAFO)” regulation in Chapter 92 requires permittees to meet the requirements of this regulation.

The Commission has been successful in obtaining voluntary participation of VAOs in the nutrient management program, as envisioned by Act 38. The Commission believes that a strong voluntary program can operate simultaneously with the mandated regulatory program to further protect water quality in the Commonwealth.

Various nutrient management planning responsibilities are set forth in detail in this final-form regulation. These include requirements to prevent pollution from land application of manure and other nutrient sources, and minimum standards for the construction, location, storage capacity and operation of animal manure storage facilities.

Nutrient management plans are required by Act 38 to be developed by nutrient management specialists who meet rigorous technical qualifications, and who are certified by the Department of Agriculture. Additionally, plans are to be submitted to the Commission or delegated county conservation district for approval. The final actions by the Commission and delegated county conservation districts are subject to appeal by the Environmental Hearing Board.

Agricultural operations may apply for financial assistance to develop and to implement nutrient management plans. In accordance with Act 38, Commission responsibilities for administering the act and regulations can be delegated to county conservation districts, and this is being done in 60 of the 67 counties across the state to ensure timely and effective implementation of the program.

Numerous public comments were received on the proposed regulation. This final-form regulation contains revisions to the proposed regulation based on those comments, as well as interaction with the Nutrient Management Advisory Board and the various state and federal agencies involved with implementation, mentioned above. The changes from the proposed regulation are described below, followed by a description of comments and the Commission’s responses to those comments.

E. Summary of Changes from the Proposed Regulations.

General

Clarifying and stylistic changes to the existing regulations are made throughout these revisions. Many changes are intended to address changes requested by the Independent Regulatory review Commission to conform to the Regulatory Review Act, 71 P.S. §§ 745.1 et seq. Some of these will be described below.

Phosphorus Management

Phosphorus is one of the two nutrients of concern in managing nutrients to protect water resources. The other is nitrogen, which was already expressly addressed in the prior regulations. A decision of the Environmental Hearing Board in April, 2004, determined that the law requires nutrient management plans to specifically address phosphorus as well as nitrogen. The proposed regulation contained a requirement in §83.293(b) to address phosphorus runoff by restricting land application of nutrients based on a "Phosphorus Index" methodology developed by Penn State University.

In the final regulation, several changes were made. First, the basic criteria required for phosphorus management, and a preferred approach, are now described in the regulation. These reflect various source and transport factors which influence phosphorus runoff, and include phosphorus soil levels and distance to surface waters. These criteria, factors and methodology are based on extensive study of phosphorus runoff from farms in Pennsylvania and elsewhere in the country.

Second, agricultural operations are given the option of following either the Phosphorus Index, or other methods approved by the Commission, to meet those criteria. The Phosphorus Index is preferred by the Commission due to the extensive work done in Pennsylvania by Penn State University, the U.S. Department of Agriculture (USDA) and others, to develop it.

Third, a five-year phase-in period for implementation of the full scope of the phosphorus management regimen is allowed. This will give the industry time to find alternative means of addressing the excess nutrients generated by NMP operations, while still imposing new restrictions on phosphorus application that are protective of surface waters. The phase-in would apply to existing NMP operations, and importers that elect to use the phosphorus index methodology. The phase-in would not apply in certain circumstances, such as where fields drain into Special Protection waters. Importantly, the phase-in would still require that basic phosphorus control measures are taken, by limiting land application to the phosphorus removal rate.

Finally, § 83.293 has been reorganized to better reflect the interaction between phosphorus and nitrogen considerations for determining proper nutrient application rates.

Phosphorus is also addressed at manure import sites, discussed next.

Manure Export

Another significant concern with the prior Chapter 83 regulations was management of manure that is exported away from NMP operations, particularly CAOs. For instance, 28% of manure generated by CAOs is exported, while only 3% of manure from VAOs must be exported.

The proposed regulation addressed this in two main ways—by requiring commercial manure haulers and brokers involved in manure export from NMP operations to meet certain qualifications, and to require that phosphorus runoff be managed at the import sites through either a 150' manure application setback or use of the Phosphorous Index. The proposed regulation also required brokers to develop nutrient balance sheets.

The final regulation addresses the qualifications of commercial haulers and brokers by simply referring to the new Commercial Manure Hauler and Broker Certification Act, 3 P.S. §§2010.1 – 2010.12, instead of the criteria contained in the proposal. *See* §§ 83.301(d), (h). That statute addresses the same issue targeted in the proposed regulation. The final regulation also requires that the name of the broker be listed in the plan, but names of haulers do not need to be listed. *See* §§ 83.301(d), (c)(5) and (e)(1), and 83.282(d).

Phosphorus management is addressed in the final regulation by giving importing operations several options, all of which address phosphorus risks more specifically than the 150' setback option in the proposed regulation. These options, contained in § 83.301(c), require one of the following: (1) application of nutrients according to the phosphorus removal rate and using a 150' setback from streams, lakes and ponds; (2) application using the nitrogen removal rate as long as the application is outside a 150' setback and only if the soil test level for phosphorus is below 200 parts per million, (3) use of the Commission-approved Phosphorus Index; or (4) use of a nutrient management plan approved under these regulations. In addition, the exporter (or broker) must prepare a “nutrient balance sheet” for use by the importer which incorporates the restrictions contained in § 83.301.

The final regulation deletes the requirement for brokers to develop nutrient balance sheets, but it does require that the broker ensure that a nutrient balance sheet (or alternatively an approved nutrient management plan) exists for all the lands where the exported manure will be applied. *See* §83.301(e)(2). Finally, the final regulation exempts from these requirements export of “de minimis” quantities manure. *See* § 83.301(i).

Manure Application Setbacks

Section 83.294(f) of the proposed regulation contained a number of setbacks from vulnerable areas such as open sinkholes, drinking water sources and concentrated water flow areas, as well as from streams, springs, lakes and ponds. The setback distances

varied depending on the slope of the field. Special setback provisions were proposed for land application during Fall and Winter.

The final regulation makes several changes to those provisions. First, a general setback of 100 feet is required for all perennial and intermittent streams with a defined bed and bank, lakes and ponds. In lieu of a setback, a 35' vegetated buffer may be used. This is the setback/buffer requirement in Act 38.

Second, setbacks from concentrated water flow areas were deleted, as were increased setbacks on steep slope fields. Third, details were added to the general setbacks for Fall application when there is less than 25% plant cover or crop residue. Fourth, more specifics were added for land application during Winter. For instance, § 83.294(g) includes a new setback from wetlands identified on the National Wetlands Inventory map that are in floodplains for exceptional value streams, and requires minimum plant cover or residue on fields where manure is applied during Winter.

Plan Development Funding and Other Financial Assistance

Under the proposed regulation, there was no funding program to address the new phosphorus planning requirement. The final regulation authorizes a new funding program to support farmers' efforts to maintain and update their nutrient management plans annually, as may be necessary for phosphorus planning. *See* § 83.214.

In addition, the final regulation adds a category of funding recipients by specifying that the Commission can support multi-partner manure processing facilities. The final regulation limits plan implementation funding to operations having over 8 AEUs.

Control of Erosion and Sedimentation From Plowing and Tilling

E&S control is an important component of addressing phosphorus impacts to surface waters, because the main threat from phosphorus loss comes from surface runoff of phosphorus bound up with the sediment. The proposed regulation required that a certified planner verify that a current Erosion and Sediment Control Plan ("E&S Plan") was being developed for the operation, as required by Chapter 102, administered by the DEP.

The final regulation requires that this verification be done by either the delegated county conservation district, or DEP. *See* § 83.361(f). This requirement is not effective until three years after the regulation goes into effect, due to current efforts by DEP to provide more detailed guidance to the industry on its E&S requirement. This provision does not affect the legal requirement to comply with Chapter 102; it only addresses verification during the nutrient management plan approval process under Act 38.

Field Stacking

In certain circumstances it is important for farmers to temporarily stack dry manure in fields where it will be applied. The proposed regulation allowed field stacking as long as the stacks meet certain shaping, location and timing criteria. The final regulation includes a similar provision, and adds more detail. It also more explicitly establishes the time period allowed for these stacks to meet those criteria, to 120 days, after which the manure must meet more stringent storage requirements. Finally, it clarifies that the temporary stacking requirements apply to importing operations. *See* § 83.294(h).

Plan Amendments

The final regulation includes several changes to the previous version of § 83.371, such as the need to amend the plan during the triennial review to reflect consideration of phosphorus under § 83.293, and to reflect plan updates. *See also* § 83.262(c)(2). It provides flexibility for minor changes, and provides more clarity on what those are, although notice to the district is required. For instance, whenever adding new importers, the final regulation allows the operator to send certain documentation to the plan review authority (e.g., a delegated county conservation district) prior to transport. Other clarifications to § 83.371 are included, such as an express prohibition on implementing any significant changes in the operation before the amendment is approved.

Nutrients to be Addressed

The proposed regulation simply referred to “nutrients.” The final regulation clarifies that nitrogen and phosphorus are the only two nutrients to be addressed by best management practices, or “BMPs,” under the regulation. *See* §§ 83.201 (definition of “nutrient”), 83.272(e) and 83.291(a). This is based on the wealth of scientific opinion that these are the only two nutrients from agricultural operations affecting water quality. This is also consistent with Act 38, which authorizes the commission to determine which nutrients must be considered under the act.

Use of Outside Reference Documents

The proposed regulation continued the use of several reference documents developed by external sources such as Penn State University to meet the regulatory requirements, that were contained in the original regulations. The final regulation changes this approach throughout, by setting performance standards, and then identifying reference documents that can be used to meet those standards. Alternative reference sources, data and methods may be used in plans if they are approved by the Commission. For example, *see* § 83.291(c)(3).

Special Protection Waters

The proposed regulation made no distinction in the level of protection to be given to surface waters potentially affected by NMP operations. The final regulation contains additional requirements and protections for waters classified as "Special Protection" under Chapter 93 (relating to water quality standards). *See* § 83.293(c)(4). It also contains special protections for wetlands identified on the National Wetlands Inventory map that are in floodplains for exceptional value streams. *See e.g.*, § 83.294(g).

Signature Requirements

The proposal required that the plan be signed by the operator "which meets the signature requirements of the Commission." The final regulation details those requirements. For instance, if a plan is signed by a corporation, the signature must indicate what office the signatory holds in the corporation. Plans signed by a corporation must include a formal document from the corporation, as an appendix to the plan, indicating that the signatory has legal authority to sign the plan for the corporation. *See* §83.261(9).

Definitions

A number of the existing and proposed definitions were amended, some new definitions were added, and some were deleted:

Existing definitions amended on final: *animal equivalent unit, fund, manure storage facility and manure group.*

Proposed definitions amended on final:

Farming Resources: the revisions clarify that horses are included in the scope of the regulation.

Nutrient: this definition is revised to clarify that the regulations only require BMPs for nitrogen and phosphorus.

Others: *in-field stacking, manure group, nutrient balance sheet, phosphorus index, plan and VAO.*

New definitions:

Act: This new definition reflects the recently enacted Act 38, which replaces the Nutrient Management Act, for purposes of these regulations.

Act 49: This new definition refers to the new Commercial Manure Hauler and Broker Certification Act.

Animal Unit: This definition was added, along with a revision to the definition of AEU's, to clarify the difference between the two.

Agricultural Erosion and Sediment Control Plan: This new definition clarifies the type of erosion and sediment control plan referred to in the regulations, and its relationship to a conservation plan.

National Wetlands Inventory: This definition describes a new term used in § 83.294(c)(4) regarding the scope of setbacks for land application during Winter months, and § 83.351 regarding location of manure storage facilities.

Manure: This definition clarifies this important term used in the regulation. Redundant language was then deleted. *See e.g.*, § 83.291(c)(2)(ii).

Others: Broker, buffer, commercial manure applicator, intermittent stream, soil test level and winter.

Definitions deleted:

Conservation Plan and Erosion and Sediment Control Plan: these definitions were deleted in lieu of the new definition of Agricultural Erosion and Sediment Control Plan.

Others: department, existing agricultural operation, surface water and temporary manure stacking areas.

Other Changes:

One Planning Standard: The proposed regulation contained two virtually identical sets or provisions, one for CAOs and one for volunteers, or "VAOs." The final regulation merges the two. *See e.g.*, §83.261.

Required Plan Format: The final regulation adds the requirement to use a standard format developed by the Commission for plans submitted for approval under Act 38. *See* §83.272(b).

Manure Storage Setbacks: The scope of the setbacks for manure storage facilities is expanded from the proposal to include intermittent streams, and, similar to the setbacks for land application in § 83.294, wetlands identified on the National Wetlands Inventory map that are in floodplains for exceptional value streams. *See* §§ 83.351(a)(2)(v)(B) and 83.351(a)(2)(vi)(B).

Bare Ground Application Restrictions in the Fall: The proposed regulation allowed for Fall application "according to standards contained in the *Pennsylvania Technical Guide*." The final regulation requires control of runoff until the next growing season, and

specifies two BMPs which will be allowed in lieu of a cover crop—manure injection and manure incorporation—under certain specified circumstances. *See* §83.294(f)(5).

Manure Spreader Calibration: The proposed regulation contained some ambiguity on the requirement for calibrating manure spreaders, which helps ensure proper application rates. The final regulation contains added details to clarify the requirement. *See* § 83.294(c).

Pastures: The proposed regulation required that pastures meet the same phosphorus planning requirements as crop fields. The final regulation provides for additional alternative measures unique to pastures to protect against phosphorus runoff, in lieu of outright prohibition of their use. *See* § 83.294(j).

Manure Testing: The final regulation creates an exception for the annual testing requirement contained in the proposal, for minor manure groups. It also allows combining similar manure groups, and use of book values for pastures. *See* 83.291(c)(3).

Notification of Owners of Rented/Leased Land: The proposed regulation did not have any requirements regarding owners of rented and leased land. The final regulation requires a statement in the plan that indicates that the owner has been notified that a plan is being submitted which will allow for the application of manure on his/her land. *See* §83.261(10).

Temporary Manure Stacking Areas: This terminology has been changed in the final regulation to “emergency manure stacking areas.” In addition, these stacks are limited to 60 days unless the district or SCC authorizes a longer period of time for the operation, and the operator is required to inform the district when the emergency manure stacking allowance is to be used. *See e.g.*, §83.311(e).

Soil Tests: The proposed regulation required that soil test results be submitted for soil Phosphorus levels. The final regulation clarifies that soil test results in summary form, not the actual laboratory reports, can be submitted. This is to be done as an appendix to the plan. The appendix will be in the form of a chart providing field number, P, K and pH soil levels, date of test and name of the lab that provided the analysis. *See* §83.281(e).

Scope of the regulations: Several sections now clarify that the regulation is directed at CAOs, volunteers and agricultural operations required to develop compliance plans as described in § 506(j) of Act 38. *See e.g.*, § 83.202. Collectively, these are called “NMP operations” in the regulation, because they develop and implement nutrient management plans.

Potassium: The proposed regulation did not require reporting on soil levels of potassium, even though most plans now contain that information. Several sections of the final regulation require the plan to list potassium crop needs and application rates, based on soil fertility issues. Potassium runoff does not affect water quality, but management of

potassium is important to ensure that adequate soil fertility levels are addressed to meet crop production goals. *See e.g.*, § 83.272(e).

Plan summary information: Some new requirements are included, such as the names and addresses of the owners of leased and rented land, and details on BMPs. *See e.g.*, §§ 83.281(a)(6)(i) and 83.282(b).

Irrigation systems: More detailed requirements are included in the final regulation, such as the need for computations for application rates and depth, and an additional restriction for irrigation. *See* § 83.294(d).

Winter application: The proposed regulation had special requirements for winter application, in different portions of the regulation. The final regulation consolidates them into one subsection, and adds several new requirements, such as the need for additional details in the plan, setbacks from certain wetlands, and minimum ground cover. *See* § 83.294(g).

Animal concentration areas: the existing provisions in § 83.321 are now in § 83.311(c), and several changes were made, such as the addition of details for controlling access to surface waters. Alternatives for compliance are now included.

Emergency stacking areas: Formerly called “temporary stacking areas,” several new requirements are added to protect water quality, including a 60 day time limit. *See* § 83.311(e). These are different from “in-field stacking areas,” described in § 83.294(h).

Plan reviews: the process of plan reviews and approvals is clarified. *See* § 83.361.

E. Summary of Comments and Responses on the Proposed Regulations.

Phosphorus

Numerous comments were directed at the proposed provision on phosphorus in § 83.293(b). There was significant support for the idea of phosphorus management, and a phosphorus index, but conflicting comments on how to implement it.

Some commenters stated that this requirement would impose a severe financial burden on farms around the Commonwealth because of the lack of options for use of the manure. Some requested additional flexibility in the provision for existing operations, such as a phase-in period. This included the NMAB and the House and Senate Agriculture and Rural Affairs Committees. Other commenters asserted that the phosphorus provisions were not stringent enough to protect water quality, and suggested use of “phosphorus balancing.”

Many commenters requested that there be more details regarding the Phosphorus Index. Commenters who reviewed the current Phosphorus Index developed by Penn State

University, and approved by the Commission, had various comments suggesting improvements which tracked the tenor of the general comments described above.

The Independent Regulatory Review commission (IRRC) requested that the rationale behind use of the Phosphorus Index be explained. IRRC also questioned the legality of requiring compliance with a methodology not prepared by the Commission or detailed in the regulation.

The final regulation contains new requirements for phosphorus management, as required by Act 38 under the April, 2004 decision of the Environmental Hearing Board. Based on the public comments, the final regulation contains several changes to the proposal. These changes are reflected in the current § 83.293, which has been revised and reorganized based on the comments.

First, the basic criteria required for phosphorus management, and a preferred approach, are now described in the regulation. These reflect various source and transport factors which influence phosphorus runoff, and include phosphorus soil levels and distance to surface waters. These criteria, factors and methodology are based on extensive study of phosphorus runoff from farms in Pennsylvania and elsewhere in the country.

Second, agricultural operations are given the option of following either the Phosphorus Index, or other methods approved by the Commission, to meet those criteria. The Phosphorus Index is preferred by the Commission due to the extensive work done in Pennsylvania by Penn State University, the U.S. Department of Agriculture (USDA) and others, to develop it.

Third, a five-year phase-in period for implementation of the full scope of the phosphorus management regimen is allowed. This will give the industry time to find alternative means of addressing the excess nutrients generated by NMP operations, while still imposing new restrictions on phosphorus application that are protective of surface waters. The phase-in would apply to existing NMP operations, and importers that elect to use the phosphorus index methodology. The phase-in would not apply in certain circumstances, such as where fields drain into Special Protection waters. Importantly, the phase-in would still require that basic phosphorus control measures are taken, by limiting land application to the phosphorus removal rate.

Phosphorus is also addressed at manure import sites, discussed below.

Manure Export

The export of manure from NMP operations was another source of many of the comments received on the proposed regulation. Some commenters recommended less restrictions on manure export so that the export market would not be disrupted. Others raised questions about the impact these new requirements would have on that market. Several recommended establishment of a minimum threshold for the increased requirements.

However, the majority of the comments supported the additional requirements, including the use of nutrient balance sheet (NBS) and setback requirements. Others recommended additional requirements, such as including phosphorus in the NBSs. Among these commenters, there were varying opinions on how to address phosphorus at import sites. Some were satisfied with the proposal, while others, including the Nutrient Management Advisory Board, recommended giving import sites several options. The NMAB also recommended making changes which reflect the requirements of Act 49.

There were also a number of comments regarding haulers and brokers. The comments generally recommended that haulers not be named in the plan, to allow for flexibility for the exporting farm. The comments generally favored the additional requirements on brokers.

Finally, several comments recommended various ways to facilitate the export market, such as dedicating staff for this purpose at county conservation districts.

This regulation includes new requirements on manure export, to help close “the manure export loophole,” similar to the proposed regulation. However, a number of changes were made to the proposed regulation as a result of the comments.

First, the regulation retains the basic approach of requiring NBSs (or nutrient management plans), and signed agreements with importers. The Commission feels that these are essential components to addressing manure export issues, along with the new requirements under Commercial Manure Hauler and Broker Certification Act, 3 P.S. §§2210.1 – 2010.12 (Act 49).

However, the regulation provides flexibility for addressing phosphorus by giving importing operations several options. These options, contained in § 83.301(c), require one of the following: (1) application of nutrients according to the phosphorus removal rate and using a 150’ setback from streams, lakes and ponds; (2) application using the nitrogen removal rate as long as the application is outside a 150’ setback and only if the soil test level for phosphorus is below 200 parts per million, (3) use of the Commission-approved Phosphorus Index; or (4) use of a nutrient management plan approved under these regulations. All of these options address phosphorus risks more specifically than the 150’ setback option in the proposed regulation..

In addition, the exporter (or broker) must prepare an NBS for use by the importer, which incorporates the restrictions contained in § 83.301. The final regulation adds some new provisions which clarify the requirements for NBSs, and the responsibilities of brokers. Moreover, the regulation requires that the same setbacks applicable to NMP operations apply to importers, for the exported manure.

Further, the final regulation exempts from these requirements export of “de minimis” quantities manure, and haulers do not need to be named in the plan, as suggested by several commenters.

Finally, the regulation addresses the qualifications of commercial haulers and brokers by simply referring to the new Act 49. That statute addresses the same issue targeted in the proposed regulation.

Manure Application Setbacks

There were a number of comments on the issue of setbacks from water resources and land application of manure. First, however, it is important to note that Act 38 added, for the first time, a specific statutory requirement for setbacks.

While some commenters opposed the regulatory setbacks because, for example, they do not take into account site-specific conditions, many others supported the proposed provisions on setbacks. Many of the commenters supporting the setbacks also recommended that they apply throughout the year, not just when the ground is snow-covered, frozen or saturated. There also were a number of comments and suggestions on the details and scope of the setbacks. For instance, several commenters suggested that the setbacks should be the same as those for CAFOs, and others recommended clarification of "wetlands." This latter issue was of particular concern to the NMAB.

The Commission agrees that setbacks are an important part of the regulation, so the final regulation contains many of the same setbacks as in the proposed regulation. However, some setbacks were deleted and others added, and several other changes were made, as recommended in the comments. It is important to note that the phosphorus assessment required in § 83.293 also addresses surface runoff issues.

First, a general setback of 100 feet is required for all perennial and intermittent streams with a defined bed and bank, lakes and ponds. In lieu of a setback, a 35' vegetated buffer may be used. This is the statutory setback/buffer requirement in Act 38.

Second, setbacks from concentrated water flow areas were deleted, as were increased setbacks on steep slope fields. Third, details were added to the general setbacks for Fall application when there is less than 25% plant cover or crop residue.

Fourth, more specifics were added for land application during winter. For instance, § 83.294(g) clarifies that wetlands are those identified on the National Wetlands Inventory map that are in floodplains for exceptional value streams. In addition, the other requirements for winter application are contained in that subsection, including requirements for minimum plant cover or residue.

Plan Development Funding and Other Financial Assistance

Many comments were received on the expected financial impacts of the regulation. Commenters recommended that additional funding be made available to CAOs meet the new requirements of the regulation, both for planning and for plan implementation. Some

commenters opposed this new funding. A number of commenters suggested that the Commission develop new programs to address alternative uses of manure.

The NMAB recommended that the PDIP program provide for an annual payment to support maintenance and record-keeping efforts.

The final regulation authorizes a new funding program to support farmers' efforts to maintain and update their nutrient management plans annually, as may be necessary for phosphorus planning. *See* § 83.214.

In addition, the final regulation authorizes the funding of alternative manure technology projects to address phosphorus imbalances on farms. The Commission has added a category of funding recipients for alternative projects by specifying that the Commission can support multi-partner manure processing facilities.

The final regulation authorizes funding of a cover crop implementation program to assist farms in meeting the fall manure application restrictions in § 83.294(f).

Control of Erosion and Sedimentation From Plowing and Tilling

Several comments were received which raised questions and made recommendations regarding the requirement to verify that a current erosion and sediment control plan is being implemented on the NMP operation. Many of the comments focused on the question of what is an acceptable E&S plan, and how a conservation plan could be used to meet the requirement.

A number of commenters questioned whether planners were qualified to do the verification, since the E&S requirement is administered by DEP, not the Department of Agriculture which certifies those planners. Some commenters expressed concern that there is not enough technical support being made available to farmers to even develop E&S plans, and that districts will need additional resources to do these reviews. One commenter asked what happens if the farm does not have an E&S plan and is therefore out of compliance with the DEP regulation in Chapter 102.

The Commission has retained the requirement to verify that an E&S plan is being implemented, but it has also made several changes in light of the comments. The fundamental concepts behind this approach are: (1) because control of E&S is so important to phosphorus management, it is useful to utilize the existing legal requirement administered by DEP instead of developing a new one; and (2) the regulation is not creating a new requirement, nor does the Commission intend to enforce DEP's requirement in Chapter 102.

The final regulation now requires that this verification be done by either the delegated county conservation district, or DEP, not the planner. In addition, this requirement is not effective for existing operations until three years after the regulation goes into effect, due to current efforts by DEP to provide more detailed guidance to the industry on its E&S

requirement. This effective date provision does not affect the legal requirement to comply with Chapter 102; it only addresses verification during the nutrient management plan approval process under Act 38.

Field Stacking

A number of commenters discussed in-field stacking of manure. Most felt that the time allowed for this in the proposed regulation was too long, and offered various maximum time periods. Several commenters pointed out that EPA takes the position that any operation that stacks dry manure in a field uncovered for longer than 2 weeks may be a CAFO if it meets certain animal number thresholds (e.g., 30,000 chickens). The NMAB recommended deferring action until Pennsylvania-specific data could be compiled and studied. The NMAB also voiced concern over a possible conflict between this regulation and the DEP CAFO regulation, on this issue.

The Commission feels that in certain circumstances it is important for farmers to temporarily stack dry manure in fields where it will be applied, although it agrees that more details are needed in the regulation. Therefore, the final regulation clarifies the requirement by describing the types of BMPs needed. It allows stacking for longer than two weeks, but it more explicitly establishes the time period allowed for these stacks to meet those criteria, to 120 days, after which the manure must meet more stringent storage requirements. Finally, it clarifies that the temporary stacking requirements apply to importing operations.

Manure storage

Most of the comments on manure storage focused on setbacks for storage facilities. The comments uniformly recommended stricter requirements than those proposed by the Commission, although there was disagreement on the ability of county conservation districts to grant waivers.

The Commission considers the existing manure storage requirements to be protective of the environment for the most part. Some changes were made to the manure storage provisions to improve that protection. For instance, the scope of the setbacks for manure storage facilities is expanded from the proposal to include intermittent streams, and, similar to the setbacks for land application in § 83.294, wetlands identified on the National Wetlands Inventory map that are in floodplains for exceptional value streams. In addition, the waiver provision was narrowed.

Plan Amendments

Virtually all of the comments on the plan amendment provisions recommended providing more flexibility to the operator, and the district, when relatively minor changes are made.

The final regulation clarifies the circumstances under which a plan amendment is required, in response to these comments. It provides flexibility for minor changes, and provides more clarity on what those are, although notice to the district is required. For instance, whenever adding new importers, the final regulation allows the operator to send certain documentation to the plan review authority (e.g., a delegated county conservation district) prior to transport. The documentation becomes a part of the plan and the additional importers are formally approved during the three-year plan review.

The regulation requires a plan amendment during the triennial review to reflect consideration of phosphorus under § 83.293, consistent with this important issue in the regulation. The regulation also contains an express prohibition on implementing any significant changes in the operation before a required plan amendment is approved.

Recordkeeping

Commenters expressed opposing views on the level of record-keeping which should be required. Some offered that the existing record-keeping is either adequate or excessive, while others argued for more records and more public access to those records.

The Commission believes that sufficient record-keeping is already in place, so the final regulation does not differ substantially from the proposal. The changes involve pastures and manure export.

Public Involvement

There were conflicting comments about the ability of the public to be involved oversight of the Act 38 program. For instance, some commenters wanted more information published in the Pennsylvania Bulletin, such as receipt of nutrient management plans by the districts, while others wanted less information available to the public, such as the records of manure export.

The issues addressed by the comments are outside the scope of the regulation. Publication of various stages of the nutrient management plan development is a matter of policy for the Commission. The Commission is continuing to evaluate this policy. The accessibility of records is a matter of state law under the Right to Know Law.

Special Protection and Impaired Waters

There were several comments regarding sensitive surface waters. First, these commenters pointed out the special protections required under Chapter 93 for High Quality and Exceptional value surface waters, and asserted that the proposed regulation did not recognize this. Second, the commenters recommended that special consideration be given to nutrient management plans for farms draining into surface waters determined by DEP to be "impaired" from agriculture.

The final regulation contains additional requirements and protections for waters classified as "Special Protection" under Chapter 93 (relating to water quality standards). See § 83.293(c)(4). It also contains special protections for wetlands identified on the National Wetlands Inventory map that are in floodplains for exceptional value streams. See §§ 83.294(g). However, there are no special provisions for impaired waters because the actions which need to be taken in these situations are very location-specific, are developed by DEP under its "Total Maximum Daily Load (TMDL)" program, and therefore do not lend themselves to general requirements in the Commission's regulation.

General

There were a number of comments about the Act 38 program generally. They reflected the differing views described in the other comments listed here, and their responses. These comments are not described here where they do not address the proposed regulation. These include issues such as enforcement, staffing in districts, and various Commission guidance issues.

Other categories of comments and responses:

Manure testing: Some comments addressed the annual testing requirement and other details. The final regulation retains the annual testing, clarifies certain aspects of the requirement, adds some flexibility for test analyses, pastures and similar animal types, and excludes small manure groups.

Livestock management: a number of commenters supported the proposed provision restricting animal access to streams, and most supported the restrictions on animal concentration areas. The final regulation contains provisions similar to the proposal, with some clarifications.

Soil testing: several commenters agreed with the proposed requirement that soil tests be submitted with the NMP. One commenter requested that the tests also include nitrogen. The final regulation contains the proposed soil test provision, with some modifications as suggested by some of the commenters. The regulation does not require testing for nitrogen, because it is not generally useful due to Pennsylvania's soil types and climate conditions.

Horses: all of the commenters discussing the proposal's new provisions on horses endorsed this change. The definition of *farming resources* was revised in the final regulation to ensure clarity in the Commission's intent to include horses.

Maps: several suggestions were made concerning the requirement to submit maps with the proposed NMP. The final regulation contains several changes, such as inclusion of road names. Topographic maps are still required and no scale is specified.

Nutrients of concern: several commenters recommended clarifying that phosphorus and nitrogen are the two nutrients being addressed in the regulation. The Commission, in consultation with various water quality experts, agrees, and the final regulation makes this clarification.

Definitions: concerns were raised in the comments about several definitions. A number of definitions were changed from the proposal, as described earlier in this Preamble.

Plan review/approval: Commenters requested some more flexibility, and clarity, in this area. The final regulation retains the flexibility in the proposed regulation, and clarifies the process of review and approval of NMPs.

Fertilizers: Several commenters recommended that application of commercial fertilizer be subject to the same setbacks as manure. One commenter requested no restrictions on starter fertilizer. The final regulation does not adopt these approaches.

Volunteers: Several commenters recommended consolidating the CAO and VAO provisions. Others stated concerns over loss of volunteers due to the new requirements. The final regulation consolidates the two separate sets of provisions.

Pastures: Several commenters requested flexibility on phosphorus management in pastures. The final regulation contains added flexibility.

Liquid manure: Several comments expressed concern over consideration of infiltration rates and holding capacity of soils, requesting more detailed requirements. The final regulation contains added clarity in this area, such as the factors to be considered, the need for records with computations, and an express reference to both infiltration rates and water holding capacity.

Calibration: Several commenters requested clarification on calibration of manure spreading equipment. The final regulation contains more clarity on the requirements, such as a compliance statement by the operator and records to support it, and a clear provision requiring commercial applicators to meet the requirements.

F. Benefits, Costs and Paperwork

1. Benefits

The intended result of the regulation is to strengthen the Commonwealth's current efforts to oversee NMP operations in order to protect Pennsylvania's water quality. The regulation is necessary to address the Commission's evolving understanding of nutrient management issues discussed in recent scientific research, as well as over eight years of experience implementing the nutrient management laws.

It also is a key component of Pennsylvania's efforts to ensure the industry trend toward higher intensity animal operations does not negatively impact Pennsylvania's water quality. The current program addresses approximately 13.3 million tons of manure, which is approximately 51% of all the manure generated in the Commonwealth. This equates to over 174 million pounds of nitrogen and 158 million pounds of phosphorus. The regulation will help ensure that these manure nutrients are stored, handled and applied in an environmentally sound manner to protect water quality

The final regulation will provide for much of the increased protection of water quality through specific provisions addressing potential phosphorus losses to surface waters from land application of manure and other nutrients, and through a set of restrictions on the application of manure on importing sites. These are the two major issues of concern that have been expressed to the Commission in the implementation of the current program.

The Commission has developed the final regulation in close coordination with various federal, state and local agencies and institutions. These include: the Nutrient Management Advisory Board, the Pennsylvania State University College of Agriculture, PDA, DEP, the USDA's Natural Resources Conservation Service and Agricultural Research Service, various county conservation districts, and Penn State Extension. The regulation also applies the results of current scientific information about water quality impacts from agriculture. At the same time, the Commission was very careful to minimize possible negative impact on the regulated community where possible.

Farmers will benefit from this coordination. The regulation will assist the current 901 CAO operations, and the approximately 500 additional CAOs that will be brought into the program through the revised regulation, in enhancing their water quality protection efforts. At the same time, their compliance with the regulation should increase local community acceptance of their operations by giving further credibility to their actions to protect local and regional water resources. The additional 1,325 farmers who have voluntarily participated under the prior regulations in order to protect water quality will capitalize from the similar water quality and environmental credibility benefits afforded to CAOs under this regulation. These refined regulations will assist farmers in their efforts to effectively utilize nutrient resources on their operations. The final form regulations also provides for enhanced financial assistance efforts to further assist the farm community in addressing

All citizens in the Commonwealth will benefit from the increased environmental protection this regulation will provide. Water resources potentially affected by NMP operations will be protected. Tourism is a major industry in Pennsylvania and many elements of tourism are dependent upon high quality water resources. The cost of purification of surface and groundwater by water users and suppliers should decrease as these increased water protection efforts are implemented.

Pennsylvania has worked hard over the past eight years to ensure that our nutrient management planning program developed through Act 38 (and its predecessor statute, the

Nutrient Management Act) can be used as the singular planning process to meet all nutrient management planning requirements, both federal and state. In so doing, the regulation has the added benefit of allowing our state program for Concentrated Animal Feeding Operations to meet the new federal regulations.

2. *Costs*

Existing CAOs

a. *Plan Updates*: This proposal will affect the current regulated community (901 CAOs), requiring them to update their current nutrient management plans (consistent with their current plan update timeframe) to incorporate the new criteria included in these revisions.

These updates are expected to result in an increase in the cost for developing a nutrient management plan. The average cost of a CAO plan prior to implementing the Phosphorus Index and Nutrient Balance Sheet requirements was \$938. Incorporating the new criteria into the updated CAO plans is estimated to cost an additional \$850 per CAO.

The Commission is planning to provide cost share assistance to these CAOs to offset the additional cost. With the standard 75% state cost share, the additional cost to a farmer to update a current CAO plan would be \$212 per CAO (\$850 total cost, \$638 state cost share, \$212 farmer cost). There are currently 901 CAOs in Pennsylvania; therefore, this would calculate to a net increased cost of \$191,000 for the existing 901 CAOs to develop their required plan updates over a three-year time frame.

b. *Plan Maintenance*: The criteria included in the final form regulations will necessitate operators to make annual adjustments to their approved plan due to the shift to phosphorus management. This will add an additional plan maintenance cost to the operators, which is expected to cost approximately \$400 a farm annually. The Commission will begin implementing the Plan Maintenance Program (PMP) to assist operators in keeping their plans current. Assuming that 1,000 plans will be written on an annual basis, and that this effort will be 75% cost shared, this will cost existing CAOs \$100,000 a year. This requirement is expected to begin to affect existing CAOs in the second year after the revised regulations go into affect and take until the fourth year following the effective date, to become fully implemented.

c. *Commercial Fertilizer*: The final form regulations will require an estimated 60% of our existing CAOs (540 CAOs) to export some increased portion of their generated manure due to the phosphorus element of the revised regulations, and due to revised setback requirements as required in Act 38. They will likely need to purchase nitrogen chemical fertilizer to replace the nitrogen that used to be supplied by the manure that they are now required to ship off site because of the phosphorus limitations in their

plans. Based on program records, the average CAO farm size is 94 acres. Based on a compilation of the data from the last 4 years' Pennsylvania Agricultural Statistics books, 115 bushels of corn per acre is a reasonable average for corn grown across the state. Assuming that 60% of the land on a CAO is corn ground, and seeing that CAOs exporting all their manure will need to purchase chemical nitrogen to meet this corn need, a CAO exporting all of their manure will need to purchase 7,000 lbs of nitrogen to meet the nitrogen need of the corn crop on their individual farm. At the current price of 37 cents a pound for nitrogen, it will cost these CAOs approximately \$2,600 per farm to purchase this nitrogen. This means a total cost to the industry of \$1.4 million. That cost is likely to be reduced to \$920,000, however, as described in the next subsection.

d. *Manure Export*: Those 540 existing CAOs will also need to find additional land to export their manure, or other alternative uses for the manure they produce, due to the phosphorus considerations in the regulation.

Approximately 30% of these CAOs (162 CAOs) will be able to recoup the cost of transportation of the manure from those operators receiving the manure. The remaining farmers needing to transport additional manure from their farm sites (378 CAOs) will have to pay manure transportation costs to export the additional excess manure to appropriate sites.

The cost per operation needing to export additional excess manure is estimated to be \$1,500 annually, with a total annual cost to the regulated community of \$567,000. This expense will be phased in over the next three years due to the three-year lifespan of existing nutrient management plans (FY +1 \$189,000; FY +2 \$378,000; FY +3 \$567,000).

The Commission is proposing to assist the existing regulated community to meet this financial burden by supporting alternative manure processing or utilization technologies which will economically utilize the manure on site or at a manure processing facility in an environmentally sound manner. Therefore, starting in FY +4, the Commission would expect operators to begin to implement alternative technologies reducing this farmer expense at the rate of an additional 10% each year (i.e. 10% reduction in FY +4, 20% in FY +5, etc.).

(e) *Fall and Winter Application; Field Stacking*: The final form regulation also includes additional restrictions on Fall and Winter application restrictions, and field stacking criteria. In order to address these issues some poultry farmers will find it necessary to construct manure storage facilities on site to properly store their manure until it can be applied to fields consistent with the final form criteria. Dry manure storage facilities are expected to be constructed on 250 farms, at the cost of \$40,000 per farm. Of this total cost, 50% is expected to be funded through the Nutrient Management Grants program, 25% from federal funding programs, leaving 25% to be funded by the regulated CAOs. This equates to a total of \$2.5 million to be spent by the CAO operators, spread out over the next six years.

(f) *Erosion and Sediment Control*: The proposed revisions will induce farmers to install conservation practices at a faster rate in order to reduce their phosphorus index values for their farm fields and to address the manure management controls required for animal concentration areas (barnyards and feedlots). This conservation work will be consistent with those practices in their current Erosion and Sedimentation Control Plans and the Pennsylvania Manure Management Manual, as required by existing DEP regulations, and therefore no additional costs over what is currently required under existing regulations are anticipated for these efforts

Newly-regulated CAOs

The final form regulation will bring additional farms into the CAO category. These newly regulated farms will primarily be larger-scale horse operations. These new CAOs will be required to develop and implement nutrient management plans. These operations are commonly less cropland extensive in nature and generally have less complexity relating to the management of manure on the farm; therefore, their planning costs are expected to be less than the cost of an average nutrient management plan.

Based on past program experience, the estimated cost of developing a plan for these newly defined operations will be approximately \$800. This would translate into a total cost of \$400,000 to develop nutrient management plans for the 500 newly defined CAOs. This regulation continues to provide a cost share program to offset the planning cost for CAOs. With 75% state cost share, the final cost per new CAO would be \$200 (\$800 total cost, \$600 cost share, \$200 farmer cost). This would calculate to a total cost of \$100,000 for the 500 newly defined CAOs to develop their required plans over a two-year time frame.

4. Paperwork Requirements

The regulation has been written to minimize paperwork to the maximum extent but still maintain program integrity and tracking. Farmers are required to keep records, BMP designs, emergency response plans and erosion and sedimentation control plans on their farm, but are not required to submit those documents for Commission or conservation district filing.

The program relies on the conservation district on-site plan review visits and annual status reviews to confirm proper documentation and to ensure that proper application and export efforts are implemented on farms with approved plans. The regulation reduces the amount of paperwork required by the operator to be submitted for program files by eliminating the need for the CAOs to submit exporting records for the program files where they are exporting for non-land application uses.

The program does recognize the importance of good record keeping for the protection of water quality and the implementation of the limited liability clause of the act. The program requires these necessary records but does not require them to be

submitted for inclusion in the program files, but they are reviewed annually with the operator during the program's annual on-site status review.

I. Sunset Review

The Commission will evaluate the effectiveness of these revised regulations, as it has done for the existing regulations, on an ongoing basis. Therefore, no sunset date is being established for the regulations.

J. Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on July 28, 2004, the Commission submitted a copy of the notice of proposed rulemaking, published at 34 Pa.B. 4353, to the Independent Regulatory Review Commission (IRRC) and the Chairpersons of the House and Senate Environmental Resources and Energy Committees for review and comment.

Under section 5(c) of the Regulatory Review Act, IRRC and the Committees were provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing these final-form regulations, the Commission has considered all comments from IRRC, the Committees and the public.

Under section 5.1(j.2) of the Regulatory Review Act, on (blank) , these final-form regulations were deemed approved by the House and Senate Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on (blank) and approved the final-form regulations.

K. Findings of the Commission

The Commission finds that:

- (1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202) and regulations promulgated thereunder at 1 *Pennsylvania Code* §§ 7.1 and 7.2.
- (2) A public comment period was provided as required by law, and all comments were considered.
- (3) These regulations do not enlarge the purpose of the proposal published at 34 *Pennsylvania Bulletin* 4353 (August 7, 2004).
- (4) These regulations are necessary and appropriate for administration and enforcement of the authorizing laws identified in Section C of this order.

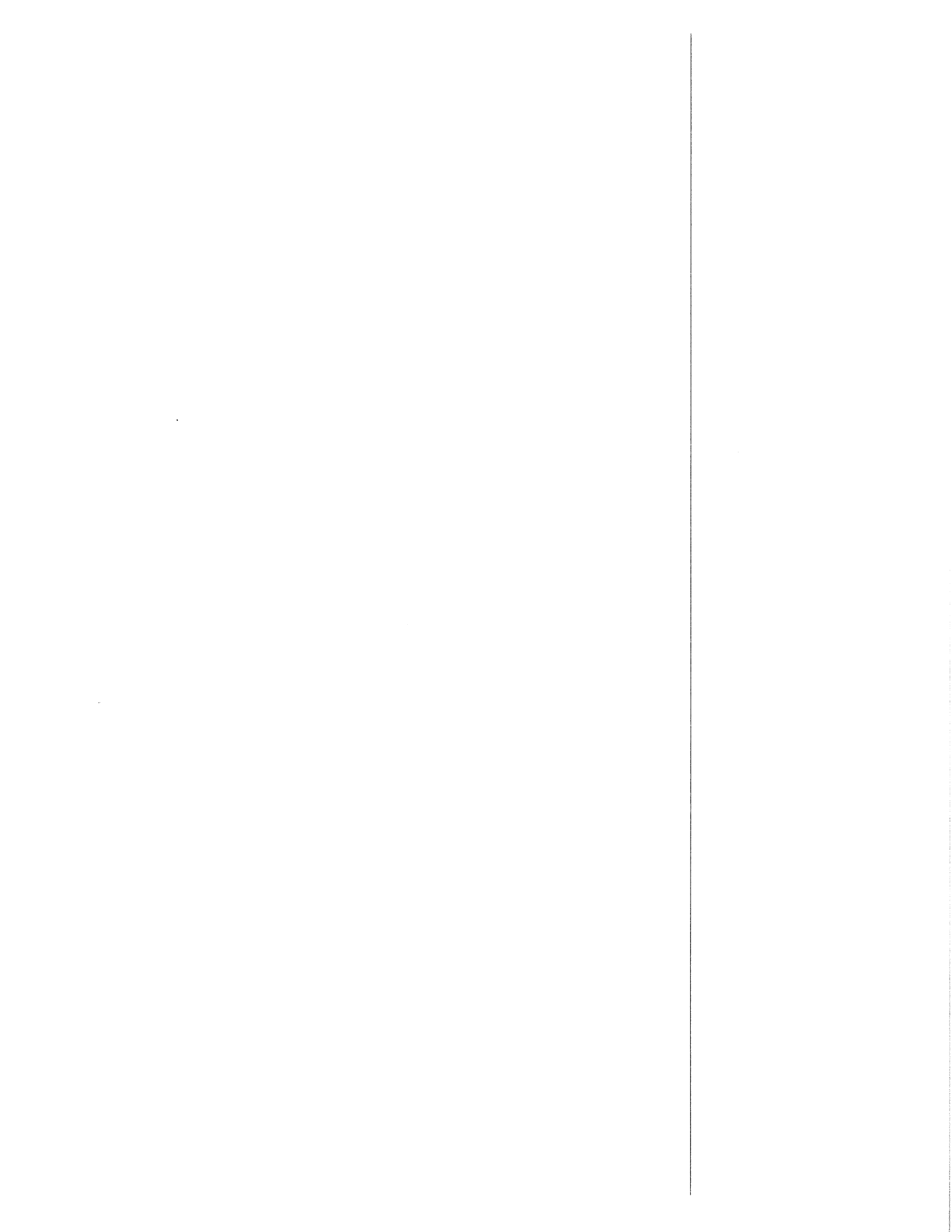
L. Order of the Commission

The Commission, acting under the authorizing statutes, orders that:

- (a) The regulations of the Commission, 25 Pa. Code Chapter 83, Subchapter D, are amended to read as set forth in Annex A.
- (b) The Chairperson of the Commission shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.
- (d) The Chairperson of the Commission shall submit this order and Annex A to the Independent Regulatory Review Commission and the Senate and House Environmental Resources and Energy Committees as required by the Regulatory Review Act.
- (e) The Chairperson of the Commission shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.
- (f) This order shall take effect immediately.

BY:

Dennis Wolff
Chairperson, State Conservation Commission



Nutrient Management Regulations

[25 Pa. Code Chapter 83, Subchapter D]

Comment and Response Document

11/30/05

State Conservation Commission

Regulatory Revision Comments

General

1. Comment: The State Conservation Commission needs to support Pennsylvania agriculture. The proposed regulations will jeopardize the agricultural industry's ability to operate in Pennsylvania. 15, 122, 125, 137, 129, 139, 188, 189

If we put United States farmers out of business, we will need to import our food from countries that do not have our same food safety standards. 15

The SCC needs to ensure that regulations do not overburden already financially strapped family farms resulting in the destruction of farmland for urban sprawl. 137

The revisions to the regulations will impose the following in Pa: reduction in the quality of food supplied by Pa farmers, a stop to economic growth, and they will create the loss of jobs in Pa's number one industry because there will be operations forced out of business under these regulations. 139

Hatfield Company was planning to build 34 new facilities in Pa, but if these regulations are passed, they stated that they would look to other states for their new facilities. 129

Generally support the package of proposed regulations leading to improved water quality. 2, 7, 10, 12, 134, 144, 145, 147, 152, 156, 157, 158, 159, 160, 161, 190, 191, 192, 193, 194

Support the regulation revisions in general. 2

The proposed regulatory changes represent a significant improvement over existing regulations and would address a number of its well-known weaknesses. 134

The proposed revisions to the Nutrient Management Act regulations are a step in the right direction in establishing more stringent standards to protect water quality and expand the types of facilities that must meet the program's requirements. 194

Continued support of nutrient management program in Pa in the interest of clean streams and improved water quality. 35, 17-110, 112, 113, 128, 132, 192

The regulatory language is difficult to understand. The language should be clear, concise and consistently applied. 4, 129, 139, 140, 156

Increased regulations on farmers are driving up the cost of farming in PA. 129, 139, 156, 162-187, 188, 189

More stringent regulations make it harder for farmers to feed the world. 188

Agriculture is already over-regulated. 125, 129, 139

The Nutrient Management Act regulations should hold the livestock industry to responsible standards of stewardship of our common land and water resources. 114, 189

The regulations should be based on sound science and scientifically developed conservation and nutrient management plans, not emotion. 7

State agricultural policies should be working to decrease the pollution from existing factory farms, and supporting sustainable agriculture. 135

Response: The final form regulations place significant yet practical requirements on larger scale animal operations in Pennsylvania. These requirements are imposed on these higher pollution potential operations in order to ensure that they are properly protecting water quality, consistent with Act 38. The Commission supports the agricultural industry in Pennsylvania and its efforts to meet these requirements.

The Commission has worked closely with various scientists at Penn State and the USDA Agriculture Research Service, as well as other state and federal agencies (such as PDA, DEP and EPA) to ensure that the regulations truly capture the state of the science to address nutrient losses from livestock operations.

The final form regulation has also been developed with the assistance and guidance of numerous agriculture industry representatives and the Nutrient Management Advisory Board to ensure that the final regulatory package will be practical for implementation by the agricultural industry.

The requirements incorporated in the final form regulation are included in order to properly direct and monitor the handling and usage of manure generated by Concentrated Animal Operations. The requirements were selected based on their ability to effectively address nitrogen and phosphorus loss from these agricultural operations, in a manner providing maximum flexibility for agricultural industry compliance.

The final form regulation provides new financial assistance programs and phase-in allowances to help the farm community come into compliance with these regulations. The Commission is also actively working on an effort to

support alternative manure technologies to provide feasible options for farmers to use their manure for something other than land application.

The final form regulations have been extensively reworded to make them easier to understand and more explicit in defining the requirements. The Commission expects that these improvements will allow them to be more consistently implemented across Pennsylvania.

The criteria established under these final form regulations continue to be required specifically of Concentrated Animal Operations, which represent only about two percent of the farms in Pennsylvania. Also, the final form regulations are implementing various new financial assistance programs to assist the regulated community in implementing these necessary water quality protection practices.

2. Comment: The Commission and legislature each need to address the long-term regional nutrient balance issues. 145

The regulations need to address the “big picture” addressing regional planning of all nutrient sources (manure, biosolids, compost, others). 61

Individual nutrient management plans, including export agreements, must be analyzed against combined manure production and application within a given watershed to avoid overloading watersheds with applied nutrients. 142

Response: The purpose of the nutrient management plan and nutrient balance sheet is to eliminate nutrient overloading on CAOs and farms importing manure from these CAOs. Therefore, the nutrient management planning effort does specifically eliminate nutrient overloading on individual CAOs and operations importing manure from them.

The Commission recognizes that implementation efforts to address long term regional nutrient imbalance will help the regulated community meet the enhanced criteria included in the final form regulations. Funding initiatives included in the final form regulations to address regional nutrient imbalance include alternative technology initiatives and manure management practices implemented by a group of farms working together to address their local nutrient imbalance issues. Also, the Commission is participating in a number of efforts and workgroups whose purpose is to identify and facilitate the implementation of alternative manure processing and utilization technologies.

In relation to addressing all nutrient sources in the regulations, the Commission has a limited scope of authority under Act 38 of 2005 and has implemented initiatives to the extent of that authority in order to protect water quality relating to nutrient losses from Concentrated Animal Operations. DEP

has a more expansive authority to deal with additional nutrient sources such as biosolids projects and commercial composting facilities.

3. Comments:

Producers need adequate time to change and implement these regulations, and financial support to assist with these changes. 136

The SCC should not change the rules in the middle of the game. Existing operations should be grand fathered in and guided by the old rules. 122

Two years is an excessive amount of time for plan submission from a new CAO. 198

Support the new plan submission time frames. 4

The producer should not be negatively impacted if a third party (such as NRCS) holds up the development of the plan submission requirements. 4

Response: The Commission has provided what it believes to be a challenging, yet obtainable time frame of two years for newly defined CAOs to develop a nutrient management plan. The initial Act 6 regulations called for new operations to develop a plan within one year of the regulations going into effect, which proved to be unrealistic.

The final form regulations provide additional time for NRCS related activities, such as development of a current Agricultural Erosion and Sediment Control Plan. This added flexibility is provided to allow existing operations to continue to farm while they work with their agency staff to put together the necessary documents to show compliance with the regulations.

Existing operations are given additional flexibility in the final form regulation relating to the implementation of the new phosphorus requirements. Also, existing operations are eligible for financial assistance provided by the program to help them implement the important water quality protections addressed in the final form regulation.

4. Comment: Support the Commission's stance on NOT including odor management in nutrient management plans. 147

Best management practices to include odor management should be required of CAOs. 158

Odor issues can have a direct effect on a community's quality of life. Best Management Practices should be required to reduce the potential effects that odor from a CAO can have on a community. 194

Response: Odor management planning is not a function of these final form regulations. Act 38 of 2005 has given the Commission the obligation and authority to develop and implement a program requiring the implementation of odor management plans on CAOs, addressing new animal or manure management facilities. Within the time frame set forth in the law, the Commission will be working in conjunction with its program partners and the Nutrient Management Advisory Board to develop these odor management regulations.

5. Comment: All farms should be required to have a nutrient management plan, not just CAOs and CAFOs. [136 147, 151, 162-187] All farmers should not be required to have a nutrient management plan. [7]

Response: Act 38 of 2005 provides limited authority to the Commission regarding whom it can require to develop and implement an approved nutrient management plan. The Commission, with the assistance of county conservation districts, is actively ensuring that every farmer required to develop and implement plans under the act is doing so, in order to meet their legal obligations.

6. Comment: Nutrient management regulations should not be strengthened on farmers until all landowners (homeowners) are held to the same standard when using fertilizer and pesticides on their home lawn. 149, 151

Response: Act 38 of 2005 provides the Commission with the obligation and authority to administer a nutrient management program on Concentrated Animal Operations. The Commission is very active in this effort and is continually looking for ways to develop a more effective and practical program. The Commission has limited legal authority, mostly found in Act 38. The program enhancements in the final form regulation are necessary to address the latest in scientific understanding related to the loss of nutrients from animal operations, and to further support the agricultural industry in their efforts to meet these requirements.

7. Comment: Special consideration should be given to land with flooding potential, soil leaching potential and the use of biosolids. 150

Response: The final form regulation has enhanced the Commission's oversight on situations with a high potential for nutrient loss. The new phosphorus provisions will result in identifications of those areas most prone to phosphorus loss, including those areas immediately adjacent to streams. Also there are additional considerations for the application of manure and other nutrient sources on CAOs for situations such as: outside of the growing season, as well as fields associated with Special Protection Waters.

8. Comment: NMPs should require wastewater testing, chemical handling, animal mortality and impact on impaired watersheds, streams with TMDLs and special protection watersheds. 150

Response: The final form regulation addresses a number of these concerns. Animal mortality is not specifically addressed in these regulations, as the PDA has the authority and responsibility to oversee those efforts on agricultural operations. The nutrient management plan will address animal mortality in situations where the mortality is composted and land applied. In those situations the nutrient management plan will ensure that the material is applied in a manner consistent with the criteria imposed on manure.

Impaired streams are also not specifically addressed in the final form regulations in that DEP is actively administering a program to develop watershed specific action plans identifying appropriate measures to address those impairments. The Commission considers TMDL action plans to be the most effective method to further define specific program criteria needed to address the identified nutrient issues in impaired watersheds.

The other issues, as they relate to nutrient management, are addressed in the nutrient management plans described in the final form regulation.

9. Nutrient management regulations should be relaxed on small family farms. 153. Concerned with over-regulation of small farms. 153, 155

Smaller operations not regulated under this act are polluting Pa surface and ground water, why aren't they regulated? 115, 120, 122, 129, 139, 140, 189

Small and medium sized farms should not have to follow requirements that the federal government does not require. Provide incentives for small and medium sized farmers to voluntarily follow the new criteria. 7, 9, 11

Response: Act 38 reestablished that only high animal density operations are required to develop and implement an approved nutrient management plan. The final form regulation reflects that these high animal density operations are the only operations required to develop and implement a nutrient management plan.

The regulations also support the involvement of lower density operations to voluntarily comply with these criteria, and establish that farms found to be in violation of the Clean Streams Law may be required to develop and implement a plan consistent with these criteria.

The final form regulation provides liability protection and financial assistance for the regulated community as well as the small and medium animal density operations voluntarily complying with these regulations.

Act 38 of 2005 specifically authorizes the Commission to regulate only high-density animal operations. That does not mean that these smaller intensity operations are not regulated. DEP has authority under the Pa Clean Streams Law to regulate these smaller intensity animal operations to protect surface and ground water pollution, and implementing regulations are found at 25 Pa. Code §§91.36 and 102.4.

Consistent with Act 38, the Commission only requires the criteria outlined in the regulations on CAOs, regardless of the size of the operation. These regulatory criteria are likely to be easier for smaller scale operations to meet, as compared to the larger scale operations.

10. Comments:

Support the fact that CAOs and VAOs will be held to the same planning standard. [157, 159, 160, 161, 191] Eliminate the VAO section of the regulations (83.391-83.491) and indicate in the regulations that the criteria established in the regulations pertain to both CAOs and VAOs. [195]

Concern over the potential loss of Volunteers in the program, due to more stringent and complex regulations. 129, 139, 156, 189

To be better able to achieve state water quality goals, the SCC should not make the paperwork requirements burdensome for Volunteers to enter the program. 190

The signature requirements should be specific or cross-referenced in section 83.391 (a), paragraph 3 (VAO section). 196

Support that those non-CAO operations designated by the SCC or DEP as needing a nutrient management plan, need to follow the CAO requirements (83.202(1)). 3, 111

The term 'a reasonable implementation schedule' needs to be defined and an exact time frame or period should be allowed for VAOs to implement their NMP, 83.441. 127

Volunteer participation may decrease due to the regulations that are so stringent that producers cannot justify the additional burden on their operation. It would seem better to have less stringent requirements that increase volunteer participation, than strict requirements that decrease participation. 4

Response: The final form regulation further enhances the planning standard requirement by eliminating the VAO section of the regulations and establishing a standard plan that will be used consistently across the state. This will allow for more consistent implementation of the program statewide.

The regulations are designed to address nutrient loss from all participating animal operations by providing one planning standard for both high and low animal density operations. The final form regulation is admittedly more stringent in an effort to ensure that water resources are adequately protected. Lower density operations will likely have an easier time meeting these program requirements, however, than will the higher animal density farms. Therefore, the additional burden on non-CAO farms will be minimal thus not significantly impacting the ability of these smaller density operations to participate.

For example, one of the major enhancements to the regulations are the additional requirements relating to exported manure. Manure export is a common occurrence for CAO operations but not volunteers. Based on a summary of the plans approved to date, only 3% of the manure generated on volunteer operations is exported. Therefore, the regulations do require these manure export criteria on all farms but they are very rarely needed for volunteer plans. The phosphorus management requirement is similar in that these criteria are easier to meet for volunteers, than for CAOs.

Nutrient management paperwork requirements for the volunteer sector is expected to be consistent with industry accepted record keeping standards related to determining and recording nutrient application rates. The final form regulations outline a somewhat significant additional documentation requirement on operations exporting manure; however, with only 3% of manure from volunteer operations being exported, exported manure documentation is not likely to be a significant concern for volunteer operations.

The signature requirements have been specifically addressed in the final form regulation. The VAO section of the regulations has been eliminated and the detailed signature requirements for both CAOs and VAOs are now described in 83.261(h).

Plan implementation time frame has been addressed in the final form regulations, where all operators are provided a maximum of three years to implement a plan.

11. Comment: The Preamble to the regulations does not reflect the increase in planning and implementation costs; such as: hauling manure greater distances, there is too much emphasis on a farmer's ability to market manure. 156, 162-187, 189, 190, 191

Farmers may be forced to ignore setbacks and other restrictions in the name of survival. 122

The government should reimburse operators for loss of land due to setbacks and added cost of production. 122

The Regulatory Analysis needs to more accurately reflect the increased costs associated with the new requirements. 4

The new regulations put Pa producers at an economic disadvantage since they are more strict than those in our neighboring states. 4

The regulations must be flexible to allow farmers to adapt their operations to meet economic challenges. 10, 12

Response: The Regulatory Analysis Form has been revised in the final form regulation package to address all expected program costs, as expressed in these comments.

The Commission is providing several financial assistance programs to assist the CAO community in the implementation of these requirements. Additional agencies such as the USDA Natural Resources Conservation Service also provide programs such as CREP and EQIP, which have provided Pennsylvania's livestock operations significant assistance in meeting state regulatory requirements.

In relation to setbacks taking land out of production, the regulations allow these setback lands to be available to the farmer for crop production. The setback and buffer requirements outlined in the regulations do not disallow crops to be grown and harvested from these areas.

In relation to competitive disadvantage, these regulations are not exactly the same as, but are similar to those imposed by our neighboring states. For example, all of our neighboring states have developed programs relying on a Phosphorus Index analysis of fields, similar to the new phosphorus considerations in §83.293(c) in these final form regulations. Through a multi-state University study, the Phosphorus Index analysis mentioned in these final form regulations has been tested alongside the indexes developed by our neighboring states. This study showed that all of the indexes from the states in this region of the country come up with similar results on the fields assessed in the project.

Relating to program flexibility, nutrient management plans can be revised to address necessary changes to the operation. The final form regulation provides funding to help operators amend or update their plans to reflect changes on the operation.

12. Comment: Assure consistency with Act 6 and Act 49 requirements. 4, 156, 190

Response: The Commission agrees with this comment, and has revised the regulations to ensure this consistency. *See e.g.*, §83.294(i).

13. Comment:

All types of nutrients should be included in NMPs. 158

Clarify the relationship between the general term “nutrients” (all nutrients) and “regulated nutrients” (N & P) with respect to water quality implications. 191

The SCC’s proposal to implement N-balance and P-Index does not address all the nutrients in manure. 3

Response: These regulations were developed to address possible detrimental effects on water quality associated with animal operations. Nitrogen and phosphorus are the nutrients associated with animal and manure management that relate to water quality concerns. The nutrient management plan will be required to include BMPs to address proper application rates, methods and timing of these two elements. This is also consistent with federal CAFO standards.

Potassium will also be required to be included in the plan to ensure that soil fertility is maintained at a level that will allow the operation to attain the proposed crop production yields. Potassium is not considered to be a nutrient of water quality concern; therefore, the regulations do not require water quality BMPs relating to potassium, such as nutrient balancing used for nitrogen.

All nutrient sources used on CAOs, VAOs, and compliance plans are required to be included in nutrient management plans.

14. Comment: Nutrient management plans should be signed by the operator and the owner (83.261(6)(7)). 3, 111

Response: The final form regulations require additional documentation when land included in a nutrient management plan is rented, consistent with the intent of this comment.

15. Comments:

Nutrient management plans must delineate measures to be taken to protect water quality in HQ, EV, and impaired watersheds with pollution loading restrictions. 111, 150

The regulations do not take water quality impacts into consideration, and they must be revised to do so. The proposed regulations make absolutely no effort to

use nutrient management planning as a tool to protect and restore Pa's impaired waterbodies. 142

Nutrient management plans must include additional measures to reduce and/or control runoff and groundwater infiltration in order to prevent further nutrient flows to impaired waters. 142

Nutrient management plans in High Quality and Exceptional Value watersheds must incorporate additional limitations and operational requirements in order to protect water quality to the greatest extent possible. 142

Response: The regulations were developed taking into account scientific findings relating to the water quality impacts of various nutrient sources used on agricultural operations. The regulations were developed to require appropriate planning and implementation criteria in all watersheds to address these scientific findings.

The final form regulation provides additional conditions on farm fields that drain to Special Protection waters. *See e.g.*, §83.293(c)(4)(v).

However, there are no special provisions for impaired waters because the actions which need to be taken in these situations are very location-specific, are developed by DEP under its "Total Maximum Daily Load (TMDL)" program, and therefore do not lend themselves to general requirements in the Commission's regulation.

16. Comment: Nutrient management plans should include the following items:

- manure application equipment,
- application rates,
- description of land where manure will be applied,
- agreements with manure importers and brokers and
- use of the phosphorus index. 194

Response: Agree. The final form regulation addresses all of these concerns.

17. Comments:

Additional resources are needed at the district level to support their efforts with the administration of the Nutrient Management Act program. 115, 127

Conservation districts are short staffed and turnover is high. The complexity of the P-Index will magnify this problem. 115

The anticipated workload for the administration of these regulations may overwhelm current CD technical staff time and resources dedicated to this program, 83.301. 127

Response: The Commission has proposed, and has been given approval to further support conservation districts in their efforts to assist the Commission in administering Act 38. Conservation districts will be provided additional funding to support their local administrative efforts. Also, the Commission has been approved to hire two additional staff to help guide and support district program administrative efforts.

18. Comment: BMPs are always done with a “Cadillac” mentality by the conservation districts. 122

Response: Our training programs provided under Act 38 inform the conservation district and private sector specialists about the wide spectrum of BMPs available to address water quality problems on the farm. The Commission will continue to stress the variety of practices that may be used to meet the requirements under the regulations.

19. Comment: Clarify the relationship between the criteria in NMA regulations and DEP criteria under Chapter 91 and 92 (Clean Streams Law and CAFO Regs). 191

Clarify that CAFOs, as defined by PA DEP, are required to have a NMP meeting the requirements of Chapter 83. 141

Clarify how the NMA regulations deal with animal mortality. 141

Pennsylvania’s regulations should be the same as EPAs. 129, 162-187, 188, 189

EPA requires CAFO nutrient management plans to include mortality management, chemical handling, and testing protocols for litter and processed waste water. The SCC regs are used by DEP to define a nutrient management plan needed for a CAFO in Pennsylvania. Therefore the SCC’s regulations need to include these items for CAFO nutrient management plans to ensure they are compliant with EPA requirements.

When manure is applied to a field, not in accordance with a nutrient management plan, and a discharge occurs, the discharge should be considered a point source. 8

Response: Nutrient management requirements for CAFOs, as well as all agriculture operations in Pennsylvania, are described in DEP’s Chapter 91 and 92 regulations. Pennsylvania’s CAFO regulations, in Chapter 92, were revised to be consistent with EPA’s most current CAFO regulation, as these comments suggest. Please refer to the October 22, 2005 *Pennsylvania Bulletin* for more information about the DEP CAFO program and its relationship to these regulations.

Animal mortality is an issue of the Domestic Animal Act administered by PDA, not Act 38 nor the Commission. But where animal mortality is composted on a CAO, the compost generated through this process is addressed in the nutrient management plan developed under Act 38.

In relation to defining a discharge, when a nutrient management plan is not followed by a CAO, the Commission can take appropriate enforcement action under Act 38, whether the discharge would be considered a point source or not.

20. Comment: Provide a required standard format for NMPs. 189

Response: The Commission agrees with this comment. This has been addressed in the final form regulations. *See* §83.272(b).

21. Comment: Soil tests should be submitted with the original NMP. 192

Response: The final form regulation requires the results of the farm's soil testing efforts to be submitted with the plan. These soil test results are to be summarized in the plan in order to minimize paperwork retained at the conservation district office. *See* §83.281(e).

22. Comment: DEP's Manure Management Manual needs to be revised to reflect changes in other regulations (Act 6, Act 49, Chapter 102, etc.). 192

Response: This is an effort of DEP when it revises the Manure Management Manual. This effort has just begun through the formation of a Manure Management Manual stakeholders' workgroup established by DEP.

23. Comment: Everyone using these regulations (Public or Private) must have uniform training requirements. 192

Response: The program does provide uniform training to the public and private sector. Conservation districts currently attend only one additional training session related to the plan review process, which is not relevant to the private sector.

24. Comment: The SCC should regularly evaluate the NMA program effort to ensure that there is correlation between program implementation and improved water quality. 192

Response: The Commission will need to rely on other agencies that are funded, trained, equipped and staffed to perform water quality assessment. For instance, DEP conducts periodic assessments of surface water quality throughout the state.

25. Comment: Support the requirement for calculations being provided in the NMP in all sections where they are appropriate. 197

Response: The final form regulation continues to provide this requirement, as it is expected to speed up the review of nutrient management plans.

26. Comment: The table of animal weights should be retained in the regulations, as it is more practical than relying on an outside source. 198

Response: As animal genetics and consumer preferences change, these standard weights have been changing. In order to implement these continuing changes in the future, the Commission sees the necessity to put these standard weights into a document that will be easier to update when necessary.

27. Comment: Section 83.362(c) – This requirement for a 3-year review by a commercial or individual NMS is unnecessary. The status review by the CD should serve this function. 198

Response: Agree. The final form regulations have been revised to allow for public specialists to perform this review.

28. Comment: Provide a guidance document detailing how to carry out the new requirements in order to increase consistency of regulatory interpretations.

Response: Agree. The Nutrient Management Technical and Administrative Manuals will be updated to reflect the requirements in the revised regulations.

29. Comment: The SCC should support an operation when all regulatory requirements have been met. 4

Response: Agree. Where an operation has met all the regulatory requirements, the Commission is willing to document that the operation has met these water quality regulations.

30. Comment: Provisions must be available to allow for unexpected changes in the manure hauler/applicator used for exporting or for manure applied on site (83.281). 4

Response: Agree. The final form regulations have been revised to allow for this flexibility.

31. Comment: New requirements should bring a minimum of paperwork and record keeping. 7

Response: Agree. The Commission has attempted to minimize paperwork and record keeping requirements, while still ensuring that proper documentation is provided under the program.

32. Comment: The Commission should exempt any operation in the Agricultural Easement Program from the proposed regulations. 143

Response: The Commission recognizes that the requirements imposed under the Agricultural Easement Program do not address nitrogen and phosphorus pollution issues that may be relevant to a farm falling under the Easement Program. Even though a farm is involved in the Agricultural Easement Program, it may have nutrient loss issues that need to be addressed to protect local and regional water resources. Therefore, these farms need to ensure that they are operating in ways that address any nitrogen and phosphorus pollution concerns. It should be noted that only those farms in the Agricultural Easement Program meeting the criteria of a Concentrated Animal Operation are required to follow these criteria.

33. Comment: Why does the SCC refer to the requirements in the: Technical Guide, Manure Management Manual, Agronomy Guide, Fact Sheet 54, Bulletin #493, the soil test recommendations handbook, Fact Sheets 254-257, and the NRAES 89 rather than including the requirements directly in the regulations. 196

Is compliance with the standards in these documents required or recommended? 196

How will the regulated community receive notice of proposed amendments to these above documents and offer input? 196

Response: In the final regulation, none of the listed reference documents are requirements. The regulation now contains specific criteria which must be met, and allows that use of these reference sources may be used to meet the criteria, but also allows other references or methods to be used if approved by the Commission. In effect, the listed documents contain the Commission's preferred approach to meeting the specific criteria in the regulation.

The Commission decided not to include the references and methods directly in the regulations because they are generally lengthy technical documents that include volumes of information that would be impractical to include in the regulations themselves. For example, the Pa Technical Guide document is housed in four large three ring binders. These are all living technical documents which change over time based on the inclusion of new technical or scientific information related to the topic addressed in the given document. If the information in the current versions of these technical documents were to be included in this regulation, the regulation would be out of date almost upon its effective date as a number of these technical documents are updated on an annual or bi-annual schedule.

All of these documents are available to the general public and can be commented on and updated as the Commission or various agency or University authors are made aware of any relevant problems with the information they contain.

The certified nutrient management planners, who are required to be used for the development and amendment of nutrient management plans, are all made aware of any revisions to these technical documents. In this way the certified planners can incorporate the latest technical information in the development or amendment of program nutrient management plans.

34. Comment: No one currently enforces 83.205, preemption of local ordinances at the state level, why have this included in the regulations if there is no enforcement of this part of the regulations. 127

Response: This portion of the law and regulation is administered through the Attorney General and the courts. The regulation states this preemption in order to provide easy reference for the courts to recognize this provision. Act 38 explicitly indicates that the Attorney General or the courts will enforce this provision of the law.

35. Comment: In 83.202, what are the “other agriculture operations” that will be required to follow the CAO criteria? What criteria will the SCC of DEP use to decide if these other operations will be required to follow the CAO criteria? 196

Response: The Commission has revised the initial proposal to outline specifically what operations will be required to follow the criteria outlined in the regulations. *See* §83.261.

36. Comment: Insert a bracket after the word “requirements” in 83.204(b). 196

Response: The Commission agrees with the comment, and the change was made to the final regulation.

37. Comment: Insert a right parenthesis between “facilities” and “shall” in 83.312 (e). 196

Response: The Commission agrees with the comment, and the change was made to the final regulation.

38. Comment: Why is the term “animal unit” used in 83.291(b)(2) and 83.401(b)(2), instead of animal equivalent unit? 196

Response: An animal unit is the proper term to use in 83.291(b)(2). The animal equivalent unit term annualizes the animal numbers on the operation,

where the animal unit designation does not. It would be inaccurate to perform the calculations outlined in 83.291(b)(2) with annualized animal equivalent unit figures, but it is accurate to use animal units. The animal unit term is an industry standard used throughout the various technical manuals for calculating manure and manure nutrients generated on an operation. The term "Animal Unit" is defined in the final form regulation, and the definition of "AEU" was revised accordingly.

39. Comment: Monitoring of ground water and down gradient surface water should be required of all nutrient management plans approved under the Act, to verify that there are no manure releases or impacts to water quality. 134

Response: Please see the response to comment number 24.

Phosphorus Management at NMP Operations

General Approach

40. Comments:

The regulations should not permit over-application of phosphorus in any circumstance. [2, 130, 144, 199] Support for the more aggressive management of phosphorus. [2, 130, 156] Support the inclusion of the Phosphorus Index. [8, 35, 17-110, 112, 113, 128, 132, 156, 157, 158, 159, 160, 161, 191, 192]

The phosphorus threshold used in the Phosphorus Index is too low. 152

The Phosphorus Index threshold should be lowered. [111, 142] Since the current Phosphorus Index allows nitrogen-based management in certain situations, the Phosphorus Index threshold value (100) should be gradually reduced over 5 years. [157, 159, 160, 161]

The Phosphorus Index does not provide strong enough restrictions on fields that already contain too much phosphorus; it only applies to fields with extremely high levels. [3, 111]. The Phosphorus Index fails to account for phosphorus in application rates for a majority of farm fields in Pa. 3. Pa's Phosphorus-Index process is inadequate. The Pennsylvania program should be made to be more in line with that of other states. The SCC is addressing phosphorus by including a Phosphorus Index as a non-binding criteria within the CNMP, and it will not provide Pa waterways with sufficient protection from phosphorus pollution. [142]

Support the Phosphorus Index but would prefer Phosphorus-Balancing on all fields in the future. 6 Phosphorus-Balancing should be used instead of P Index. [3, 6, 134, 142, 199]. The regulations must be revised to include tangible, effective and non-discretionary measures including mandatory phosphorus

balance for all fields that receive manure. [142]. The Phosphorus Index has inadequate provisions for applying the index to limit manure applications. The 200 ppms of phosphorus needed to trigger part 2 of the index is far above crop needs. A Phosphorus-Balancing approach would be more effective. [134]

Pa's 150' distance to waterbodies parameter in the Phosphorus Index screening process is too weak and should be reduced. 142

Explain why the Phosphorus Index is the best option and how it will adequately protect water resources? 196

The transport factor for the Phosphorus Index should be completely overhauled to include: lower contributory distance numbers (currently 500' to 150'); differentiation between intermittent and perennial streams; flooding risk or frequency; slope; presence of concentrated flow and direct connections from fields to water bodies. Pa's Phosphorus Index limits are the highest of all the Chesapeake Bay states. 142

The economic incentives to over-apply manure, as an inexpensive waste disposal method, need to be counteracted by effective limits based on agronomic needs concerning phosphorus. 134

The proposed Phosphorus Index system will disallow manure application on fields that have been historically utilized for manure application, thus forcing producers to ship manure farther away or go out of business. It would be sensible to allow narrower setbacks where runoff controlling practices such as no-till and cover crops are utilized. 136, 140

Response: The final form regulation contains the same basic approach that was used in the proposal, to foster enhanced management of phosphorus recognizing that phosphorus loss from agricultural operations can significantly impact water quality. Based on the public comments, the final regulation contains several changes to the proposal. These changes are reflected in the current § 83.293, which has been revised and reorganized based on the comments.

The Commission worked with Penn State, USDA Agriculture Research Service, the Nutrient Management Advisory Board and USDA Natural Resources Conservation Service for more than five years to determine an effective and practical way to address phosphorus loss from land application of nutrients under the act. The regulation sets forth scientifically-based factors to be considered to meet this legal requirement. The regulation also indicates that use of Commission guidance on controlling phosphorus loss, including the use of a Commission-approved Phosphorus Index, is the preferred method to meet this requirement in the regulation.

EPA has recognized the effectiveness and practicality of a Phosphorus Index and has recommended its use for addressing phosphorus loss from CAFOs and all other animal operations. In addition, the USDA Natural Resource Conservation Service has required a Phosphorus Index analysis in Pennsylvania for the past two years, as their method to manage phosphorus loss from agricultural operations that participate in their federally-funded programs.

The Phosphorus Index has been shown to most effectively address the phosphorus loss issue, and at the same time provide flexibility for implementation by the farm community. Based on the Commission's past year of implementing the Phosphorus Index through the interim phosphorus guidelines, the Phosphorus Index has proven to be very effective in addressing phosphorus loss.

The Phosphorus Index is a site-specific analysis of every crop field included on the agricultural operation. This analysis takes into account all forms of phosphorus being applied as well as the various source and transport factors that have been scientifically proven to be relevant to phosphorus loss in Pennsylvania. Therefore, this tool provides a means of analyzing each individual crop field to determine if, based upon factors established through scientific studies relevant to Pennsylvania, phosphorus loss is likely to occur. It recognizes that as phosphorus levels builds in the soil, risk of runoff of applied phosphorus increases. When that risk reaches a critical point, nutrient application rates must be adjusted or even prohibited.

The Phosphorus Index accounts for applications in all fields analyzed; it will only affect those fields where the field conditions and application scenario are such that the potential for phosphorus loss is high. For instance, the current Phosphorus Index uses a 150' distance-to-surface water trigger. This factor is based on actual hydraulic testing done in Pennsylvania to establish various recharge zones for Pennsylvania streams.

The Phosphorus Index credits areas that have implemented practices that minimize soil and water runoff from the fields. Implementing practices to reduce soil loss will provide a lower Phosphorus Index value for a given field, thus possibly allowing for increased amounts of manure to be applied to the field without the risk of phosphorus loss.

If the Phosphorus Index indicates loss is likely, the planner will lead a farmer through the various options the farmer has to address this loss, thus providing the agricultural community the maximum amount of flexibility and cost-effectiveness to address this challenging nutrient of concern.

As for the details of the current index, the phosphorus soil level threshold used in the Pennsylvania Phosphorus Index was developed based on phosphorus

loss studies performed through Penn State's Department of Agronomy and the USDA Agricultural Research Service office housed at University Park Pennsylvania. The Commission is very confident that the 200 parts per million figure used in the current Phosphorus Index is scientifically sound in identifying where there is a higher potential for phosphorus to become mobilized in surface runoff. This conclusion is based in part on a study involving over 89,400 soil tests taken in Pennsylvania.

The Phosphorus Index analysis tool continues to be a topic of active research here in Pennsylvania and throughout the nation. The elements of the index may be adjusted in the future as new research would indicate a change is needed.

Phosphorus is also addressed at manure import sites, discussed in the responses to Comments numbered 94, 98 and 100.

Phase-in for Existing Farms; Flexibility

41. Comments:

The Commission should allow either the Phosphorus Index or Phosphorus Balancing to be used in NMP development. The program should provide additional flexibility for existing operations in their efforts to address phosphorus loss. [7, 10, 12, 13, 129, 139, 140, 156, 162-187, 189, 190, 191, 192] Existing CAOs on the date of the new regulations should be able to apply manure based on phosphorus nutrient balancing (P crop removal) approach. [10, 12, 190, 191, 195]

Strict adherence to the Phosphorus Index should be limited to new operations after the date of the new regulations. Strict application of the Phosphorus Index standard should only apply to farms that become CAOs after the effective date of the regulations. [10, 12 190, 191.] New operations to meet the more restrictive Phosphorus-Index standard immediately, without a phase-in period for them. [195]

Phase in phosphorus planning requirements in the regulations to provide time for existing operations to move to full Phosphorus Index implementation (such as allow for a higher Phosphorus Index value for existing operations initially and phase into a more restrictive level in the future). Permit a higher Phosphorus Index value initially, phasing in a lower Phosphorus Index value over a period of years. 7, 195, 191

Operations should be given a 12-18 month grace period if application land is lost due to the Phosphorus Index. 192

Response: In an effort to provide maximum flexibility for existing farmers as they look to implement the phosphorus requirements in the regulation, a five-year phase-in period for implementation of the full scope of the phosphorus management regimen is allowed. This will give the industry time to find alternative means of addressing the excess nutrients generated by NMP operations, while still imposing new restrictions on phosphorus application that is protective of surface waters.

The phase-in would apply to existing NMP operations, and importers that elect to use the Phosphorus Index methodology. The phase-in would not apply in certain circumstances, such as where fields drain into Special Protection waters. Importantly, the phase-in would still require that basic phosphorus control measures are taken, by limiting land application to the phosphorus removal rate.

Financial Assistance

42. Comment: Federal and state officials should ensure sufficient financial and technical assistance is available to help farmers comply with the new phosphorus management standards. 10, 12, 189, 190

Producers will need technical and financial resources to transition from a nitrogen-based plan to a phosphorus-based plan. 118

Response: The Commission has a grant program, which provides funding to existing operations to implement the practices called for in their approved nutrient management plans. This grant program has been extended in the final form regulation to fund manure processing technologies on the farm to help operators deal with the new phosphorus limitations. Some of the technologies that the Commission has considered under this program are manure separation systems and phosphorus flocculation systems.

The Commission prioritizes CAOs to receive this funding, since those are the operations that are required to meet the criteria established in these regulations. Only those operations that can demonstrate that they are in financial distress are eligible to receive this funding, consistent with the language in Act 38. The Commission, in conjunction with the State Treasury Department, also provides low interest loans for similar types of practices.

The specialists involved in writing these plans are currently being trained to develop plans that include the Phosphorus Index and phosphorus management practices, in order to address phosphorus loss from these farms. The Commission will be providing enhanced financial assistance to farmers to assist them in having these plans developed as well as in implementing practices that may be necessary to better address phosphorus produced on their operations.

Impaired and Special Protection Waters

43. Comments:

Phosphorus Index does not provide adequate protection for water resources because it does not consider proximity to impaired waters, flooding potential or leaching potential. [3, 111] Add impaired waters and Special Protection Waters to the Phosphorus Index screen requiring these fields to be run through part B of the Phosphorus Index. [3]

Phosphorus Index does not provide adequate protection for water resources because it does not consider special protection (SP) waters and rainfall. 3

The Phosphorus Index does not calculate expected phosphorus loss. The regulations should require a spatially based model requiring data inputs of the soil chemical, physical and microbial characteristics; the timing of applications; landscape features and hydrologic events, in order to estimate phosphorus loss and loss reductions as may be required to meet local TMDLs. 142

Response: The phosphorus requirements in the regulation ensures that phosphorus loss is reduced for all categories of water bodies, not just impaired. The Phosphorus Index provides a site-specific analysis of the potential for phosphorus loss and addresses each of these situations. This new effort will not just affect impaired waters, but it will have a positive affect on all water bodies that receive runoff from fields where the phosphorus index has been applied.

The final form regulation provides for an enhanced protection of Special Protection waters. For fields that drain into Special Protection waters, the regulation does not allow use of a phase-in period as described in the response to Comment number 41. See § 83.293(c)(4).

There are no special provisions for impaired waters because the actions which need to be taken in these situations are very location-specific, usually involve a variety of contributors to the impairment, are developed by DEP under its "Total Maximum Daily Load (TMDL)" program, and therefore do not lend themselves to general requirements in the Commission's regulation. If additional requirements are established for the impaired waters through the development of a TMDL and a TMDL action plan by DEP, then those additional criteria established for CAOs and other contributors would be addressed in that process.

It would be impractical to expect a nutrient management plan to include model runs of the various phosphorus application scenarios on the various fields and weather conditions that may be expected on the site.

Pastures and Animal Concentration Areas

44. Comments:

Are mechanically applied and animal applied nutrients treated the same in the Phosphorus Index? [Adams CD, Dauphin CD] Does the Phosphorus Index need to be run on pastures and animal concentration areas? [7, 115] The regulations should state exactly what land on the operation must be run through the Phosphorus Index (cropland, pastures, ACAs, all land where nutrients are applied?). [192]

The Phosphorus Index needs to provide alternatives for pasture areas limited by the Phosphorus Index process. [15] On land planted to annual crops and where the Phosphorus Index value is high, this cropland should be able to be planted to perennial grass or pasture and should not be affected by the Phosphorus Index. [192]

The Phosphorus Index should not be necessary for pastures. 7

Response: As described in the response to Comment number 40, the Commission's phosphorus guidance, including a Phosphorus Index, is the preferred method to comply with the phosphorus requirements of the regulation.

When the Phosphorus Index is used to meet the regulation, it will be run on all crop fields included in a nutrient management plan. A pasture is considered a crop field and would be subject to the Phosphorus Index analysis. Pastures that rank out as very high on the Phosphorus Index will be required to follow additional criteria to protect water quality, while still allowing these areas to remain as pastures. The Commission considers pastures as a preferred land use for these areas, as long as additional water protection criteria are followed.

Therefore, the Phosphorus Index recommendations for a pasture will be tailored to address issues of specific concern to pastures including animal stocking rates, a well-established and maintained grass stand, and animal setbacks from the stream edge. *See* § 294(j).

Animal concentration areas are not considered to be crop fields and therefore are not subject to the Phosphorus Index analysis. These areas are required to implement runoff controls and area maintenance practices specific to the concerns relating to these land uses in order to minimize their affect on water quality. *See* § 83.311(c).

Erosion and Sediment Control; Conservation Plans

45. Comment: A concerted effort to focus on having every farm implement an approved conservation plan would go much further in addressing phosphorus loss

and addressing the Chesapeake Bay reduction goals, than the Phosphorus Index. 115

Response: Implementation of an Agricultural Erosion and Sediment Control Plan on every farm in Pennsylvania is under DEP authority in Chapter 102, not the Commission. The final form of this regulation will ensure that each farm falling under the Act 38 program has a current Agriculture Erosion and Sediment Control Plan, consistent with DEP's Chapter 102 rules and regulations. The information from an Agriculture Erosion and Sediment Control Plan is also needed in order to complete the Phosphorus Index analysis.

Phosphorus banking

46. Comment: Phosphorus banking should be considered an important tool to help producers implement nutrient management plans that require manure applications on a phosphorus basis. 118, 136

The regulations should allow for a multi-year application of phosphorus, such as applying up to 4 years of crop phosphorus needs in one application and not applying any additional phosphorus for the subsequent years. 136

Response: The Commission agrees with this concept. The Phosphorus Application Guidance will provide an allowance for banking in certain circumstances in order to address very low application rates that are outside the capability of current manure application equipment. These situations would still need to meet the Phosphorus Index analysis to make sure the phosphorus application is not problematic for the local water resources.

Details Needed

47. Comments:

The regulations should include details of the Phosphorus Index source and transport factors, and a reference to the Penn State fact sheet on the Phosphorus Index. The regulations need to detail how N and P applications may be restricted under the Phosphorus Index. 3

The regulations must spell out, in detailed restrictions, potential limitations on manure applications based on limits derived from the Phosphorus Index. The regulations must include specific technical guidance for the development of a nutrient management plan that incorporates a Phosphorus Index. 142

Response: The Commission agrees with the general idea behind these comments. Details have been added to the regulation in response to these comments. The regulation describes the factors which need to be assessed in the analysis, and indicates that the Commission's Phosphorus Application

Guidance (containing a Phosphorus Index approved by the Commission) can be used to meet the basic requirements. This allows the Commission to work with the scientific community to refine the Phosphorus Index as scientific knowledge of the behavior of phosphorus applied to crop lands is expanded. The regulations have also been revised to include the limitations that may be imposed on a field based on the results of the Phosphorus Index.

CAO/VAO status

48. Comment: An operations CAO/VAO status should not change due to the results of the Phosphorus Index analysis. As a Phosphorus Index value changes from year to year with the crop rotation, this should not change the operation's CAO/VAO status. 192

Response: The Commission agrees with this comment. The final form of the regulations specifically states that the results of the phosphorus considerations will not disqualify fields for inclusion in the animal density calculation.

Phosphorus Index Issues

49. Comment: The use of starter fertilizer should not be eliminated by a high Phosphorus Index value. 192

Response: Under the current version of the Pennsylvania Phosphorus Index, only fields determined by the index to have a very high risk rating would be restricted from receiving starter fertilizer phosphorus. However, according to research by Penn State's Department of Agronomy, starter fertilizer is not needed for fields with high levels of phosphorus already in the soil. Therefore phosphorus additions to high phosphorus soils are a waste of money for the farmer, and may cause an environmental problem as well. For fields with low soil phosphorus levels that rate as very high in the Phosphorus Index due to the manure application, the manure application can be reduced or applied in a different manner in order to reduce the Phosphorus Index value and allow for a starter fertilizer phosphorus application.

50. Comment: Pa should strengthen the Phosphorus Index tool to more specifically address timing of applications and the incorporation of manure, similar to New York's program. Pa's Phosphorus Index does not consider multiple applications of manure or fertilizer. Each application should be scored and then summed for a total source factor. Pa should adopt seasonal ranges at least as strong as New York's program, with all applications to frozen or snow-covered ground receiving a value of 1.0. [130, 142]

Response: The timing of manure application, and incorporation, are factors to be considered under the regulation. They are also factored into the Pennsylvania Phosphorus Index.

The Pennsylvania Phosphorus Index has been compared with the New York program Phosphorus Index and the two indexes resulted in similar results when assessing the same test fields. This study was done as part of an overall assessment analyzing all the Phosphorus Indexes from the states in this region of the nation. The overall result of that study proved that Pennsylvania's Phosphorus Index provides consistent results with those from our surrounding states.

The Pennsylvania Phosphorus Index is being revised to address multiple applications of manure and fertilizer as is suggested in this comment.

51. Comment: Pa's Phosphorus Index transport factors should differentiate between dissolved and particulate phosphorus. 142

Response: The Pennsylvania Phosphorus Index addresses both particulate and dissolved phosphorus losses. The particulate loss factors are specifically incorporated into the soil loss number provided in the index, as well as other index factors. The dissolved loss factors are incorporated throughout the index, especially within the source factors such as the soil phosphorus level.

52. Comments:

Concern about the use of the term "streams or other water bodies" as used in the Phosphorus Index; the terms could be used differently by different planners/reviewers. 129, 139, 140, 156, 162-187, 189, 191, 192

The SCC needs to define the term "stream or other body of water" for its use in the current version of the Phosphorus Index. 121, 129, 139, 140, 156, 162-187, 189, 191, 192

Response: The Phosphorus Index is currently being used in Pennsylvania by USDA-NRCS and through the Commission's interim phosphorus management policy in order to address phosphorus loss from participating farms. Certified nutrient management specialists are trained in the consistent interpretation and implementation of this water quality management tool.

In addition, Penn State and the USDA Agricultural Research Service are finalizing a guidance manual that provides direction on the interpretation of the various factors used in the index. The Commission will review the guidance and expects to approve it for use in meeting the phosphorus requirements in the regulation.

53. Comment: The North Carolina study featured in the Feedstuff Magazine (6-2-2003) contradicts the current justification for animal phosphorus restrictions. 122

Response: The Commission could not find this article.

Livestock Management

54. Comments:

Support that animal access to surface water be controlled. Livestock should not be able to deposit manure in streams. 8, 17-110, 112, 113, 128, 130, 132, 144, 157, 159, 160, 161.

The final form of the regulations should explain if “animal access to surface water in these areas shall be controlled” means the animals are prohibited access or they are just restricted in their access. If it means they are just restricted, but not prohibited, the regulations should explain to what extent they are restricted access. (83.311(e)). 196

Support the more aggressive handling of animal concentration areas. 158, 194

Response: The final form regulations continue to require controls on access to a stream within an animal concentration area (ACA) such as a barnyard or feedlot, as was provided in the proposed regulations. The term “controlled” was deleted in the final regulation, and additional details were added in the final regulation for clarity. *See* § 83.311(c)(6).

55. Comments:

Support the ACA revisions concerning minimizing the size and the amount of clean water entering the ACA, which would include a requirement for the use of BMPs. 194

Treating ACA’s by reducing the size and treating runoff is not enough to protect surface and ground water and does not meet Pa Soil and Water Conservation Technical Guide standards, 83.311(e). 127

Response: The final regulation contains a number of requirements to address ACAs. First, they must be properly sized to minimize any nutrient losses. Also required are: appropriate location of ACAs to eliminate any direct discharge of runoff into adjacent water bodies; collection and removal of manure; control of surface water entry; collection and/or treatment of polluted stormwater runoff; and control of animal access to adjacent surface waters. *See* § 83.311(c) – (d).

All of these measures will collectively address the potential for nutrient pollution from these areas. If the planner or plan reviewer, during their required site assessment, identifies a potential problem with the ACA, the

regulation requires that the plan include BMPs to address those issues of concern.

56. Support maintaining the existing language concerning ACAs. The proposed language concerning minimizing the size is not reasonable. (83.311, 83.421). 137

Response: The final form regulations have been revised to more accurately reflect the intentions of the Commission. The revised language requires that these sites be “sized appropriately” to minimize nutrient losses. In some cases, especially non-vegetated animal concentration areas, minimizing the size will be the best method to do this. In other situations, such as where vegetation can be maintained on the area, maintaining a larger lot may provide for enhanced nutrient attenuation, minimizing the concentration of nutrients in runoff water leaving the site.

Manure application requirements

General Comments on Setbacks

57. Comments:

Support maintaining the current manure application setback language already in the regulations. [137] Support stream setbacks for manure application. [147]

Does the 100’ setback from a well constitute a “taking” of land (83.404(f)(ii)). 115

The SCC should not propose absolute restrictions on land application of manure at specific times or conditions. This could impose manure storage requirements. Timing restrictions on the land application of manure should be made by the producer and their advisors. 118

Manure application setbacks should be the same regardless of the type of operation (VAO, CAO, CAFO). 192

Setbacks for manure application should be consistent with federal regulations. 3, 111, 141.

Response: The final regulation establishes a general manure application setback consistent with Act 38, which is consistent with federal CAFO regulations. *See* § 83.294(f)(1). The Commission deleted several existing setback requirements consistent with the recent enactment of Act 38, but retained several others, such as for sinkholes and drinking water wells and sources.

The Commission has also established several additional setbacks to address high-risk situations on farms. The additional setbacks established are based on scientific understanding of the movement of surface and groundwater as well as the sensitivity of certain water resources to the impact of manure runoff.

All NMP operations obtaining an approved Act 38 plan must follow the same application setbacks. These established setbacks ensure a consistent analysis of all farmers proposing to apply manure under this regulation.

The manure application restrictions apply only to those lands considered to be a high risk for nutrient loss. Not all cropland falls under this category; therefore, the setbacks do not necessarily result in the need for additional manure storage.

The Commission agrees that winter application areas will be limited on certain farms due to soil types, slopes and management practices. However, the Commission believes that winter application is only acceptable where it is judged to be protective of water quality.

The setback requirements are not a “taking” of property. These lands continue to be open and available for the planting and harvesting of agronomic crops. The only regulatory restriction on these areas is the mechanical application of manure. A farmer may still apply approved rates of commercial fertilizers within this setback to meet the appropriate yield expectation.

Timing for Setbacks

58. Comment: Proposed manure application setbacks (100 or 200 feet) should be year-round, not only in frozen, saturated or snow-covered conditions. 3, 8, 35, 17-110, 112, 113, 128, 134, 132, 144, 157, 159, 160, 161, 199

The nutrient load to water bodies will only be reduced when winter spreading of animal manure on frozen and snow-covered ground is greatly restricted. [122] Manure application on frozen or snow-covered ground should be prohibited. [3, 111, 122, 142, 150]

Support the revision to 83.404 strengthening the oversight of fields where manure will be applied in the winter. This will help address situations where poor weather conditions necessitate limited winter application. 10, 12

The fall and winter application section of the regulations should be changed to reflect a more individual based planning effort to reflect area climatic conditions, slopes and potential for pollution. Plans that specify areas for fall and winter

applications based on sound environmental principles would be better. (83.294, 83.404). 137

Are the winter application restrictions sufficient to protect water quality since commentators have expressed that nutrients are not absorbed by plants during the winter? (83.294(g)). 196

Only allow winter application if: > 25% cover and applied at P-Index level, or only 50% N need of the crop; whichever is less. 6

Any winter application requirements should be specifically outlined in the regulations. 7

Response: The application setbacks established in the final form regulations were developed consistent with the language in Act 38 of 2005. The final regulation, therefore, requires year-round setbacks for streams (intermittent and perennial), lakes and ponds.

The regulation also includes a category of setbacks addressing winter application of manure next to above ground intakes to agricultural drainage systems and prior delineated wetlands adjacent to EV streams. These winter application setbacks address areas in need of increased protection during times when runoff would be likely.

However, manure application in the winter is not prohibited. Manure nutrients applied in the winter can provide a significant crop growth response in the spring. Soil compaction is a prime concern relating to crop nutrient uptake and yields. When manure is applied on frozen ground, compaction could be eliminated, thus maintaining soil structure and improving nutrient and water uptake by the plants.

All nutrient applications outlined in the plan are reviewed by trained certified staff to ensure they appropriately address environmental concerns, including winter application. This area of the regulations has been expanded in the final form regulations to better outline what issues need to be addressed in the winter application section of the plan. For instance, the final form regulation provides additional definition to what parameters the Commission will consider.

The final form regulations also require a specific section of the plan to address proposed winter manure applications. This section of the plan will outline the location, type of manure, rate of manure application, and field conditions proposed for these winter applications, in addition to the standard setbacks called for in the regulations. Plan review staff will review this proposal and approve its implementation only if it is environmentally sound

The increased detail required for plans proposing winter application will allow for increased scrutiny by program staff to determine if the plan ensures that nutrients will not leave the site, and therefore be available for crop uptake in the spring. The final form regulations will continue to rely on this oversight in order to ensure that winter applications of manure are only allowed where the procedures and conditions are appropriate.

Also, the final form includes a 25% cover requirement on fields that will be receiving manure in the winter. In addition, the Phosphorus Index analysis takes into account the season when the manure is applied. If manure is applied in the winter, the Phosphorus Index incorporates the increased runoff risk associated with that practice, which may limit application rates in these situations.

The regulation also requires increased planning detail and regulatory requirements for fall applications where manure is proposed to be applied on low cover soils.

59. Comment: Manure applications should be prohibited immediately prior to and during precipitation events, in order to reduce the runoff and leaching of pathogens as well as nutrients. 134

Response: A gentle rain immediately after or even during application can effectively and safely incorporate manure nutrients into the soil for uptake by crops without any potentially harmful soil disturbance practices. The assumption that manure applications associated with rain events are necessarily detrimental to the environment is not accurate.

Setback Distances

60. Comments:

Setbacks should be determined based upon sound scientific information. [192]
What is the scientific process used for determining setback distances (83.294(f)(i-iv)). [4]

Manure application setbacks should be at least 150 feet from waters of the Commonwealth and any surface water conveyance. 150

Manure application setbacks should be 150 feet during frozen, snow-covered and saturated conditions, and 75 feet at all other times. 152

A 35 foot buffer or 100 foot setback should be the maximum and not left to interpretation. 190

Suggest a 100' setback or 35' buffer for consistency with the Governor's ACRE proposal and the CAFO program requirements (83.294(g)). 4, 127.

Require a 150' setback year-round for the home farm, as is required for importing fields (83.294(f)). 3, 150

Response: The setbacks in the final form regulation have been revised to address the setback and buffer requirements in Act 38 of 2005, as well as the need for the Commission to address several other areas of concern relating to manure application. These setback requirements established in the final form regulation also recognize the protections afforded under the new Phosphorus Index analysis, and the new winter and fall application restrictions.

The setback distance relating to an active well is based on the research that indicates that as a well pumps water from an aquifer, a cone of depression is established around that well where water soluble elements within that area are drawn to the well. The open sinkhole setback is consistent with the setback used for surface water, as established by Act 38 of 2005, and EPA.

The winter application setbacks are based on the understanding that manure applied to frozen ground has a greater potential to run down slope to a receiving area. The winter application restriction from a down slope above ground inlet to an agricultural drainage system is consistent with the setback established in the original regulations, understanding that these intakes will directly discharge into a stream. The winter application restriction from down slope wetlands identified on the National Wetlands Inventory map that are in floodplains for exceptional value streams are needed to provide extra protection to these sensitive areas identified as needing additional protection. *See e.g.*, § 83.294(g).

The 150' manure application restriction established for importing acres is not a general application setback, but is an application restriction for those situations where the Phosphorus Index or similar methodology is not used to assess possible phosphorus loss. The Phosphorus Index preferred by the Commission assigns a higher risk factor to fields within 150 feet of a stream. For importing fields not undergoing the Phosphorus Index (or equivalent) analysis, the regulation addresses this high-risk concern by eliminating manure application in these areas.

Therefore, the final form regulation allows the planner to run the Phosphorus Index or similar methodology on these importing fields within 150 feet of a stream to fully assess the environmental impact of the near stream application, in which case the planner can completely avoid the 150' restriction on importing fields. If the Phosphorus Index (or equivalent) is run on the importing acres, the application setbacks revert back to those established for CAO and VAO operations.

Special Protection and Impaired waters

61. Comments:

Manure application setbacks from HQ and EV streams should be greater than for other streams. 152

Nutrient management plans must delineate measures to be taken to protect water quality in HQ, EV and impaired watersheds with pollution loading restricts. 3

The planning process should take into consideration the impaired waters status and any TMDLs for the streams associated with the operation. 3

Response: The final form regulation provides specific practices to be followed adjacent to EV or HQ waters. *See* §83.293(b)(4). These provisions will ensure that the full extent of site-specific nutrient loss analysis is implemented on these high priority areas.

The regulations do not specifically address impaired waters because the actions which need to be taken in these situations are very location-specific, are developed by DEP under its “Total Maximum Daily Load (TMDL)” program, and therefore do not lend themselves to general requirements in the Commission’s regulation.

Types of Waters/Features for Setbacks

62. Comments:

All setbacks should be from all surface water. 199

Plan writers should not ignore discharges to road ditches and other water conveyances that flow to surface waters (83.311(a)). 115

Require a 150’ manure application setback from concentrated water flow areas and wetlands year round. Add intermittent streams into this setback (83.294(f)).
3

Response: The manure application setbacks established in the final form regulation are consistent with Act 38 of 2005, which specifically defines what water bodies the setbacks will pertain to.

The Commission agrees with the need to address conveyance channels. The phosphorus indexing process preferred by the Commission under § 83.293(b) in the final form regulation incorporates an analysis of water conveyance channels as they may directly convey phosphorus-laden water to a stream. These channels, as appropriate, are considered a direct connection to the

stream, thus increasing this phosphorus loss risk factor, which could limit manure and fertilizer applications to these fields.

63. Comments:

Require a 100' application setback from a sinkhole, regardless if the manure is incorporated or not (83.294(f)(i)). [3, 111, 141] Add sinkholes to these year-round application setbacks. [134]

Revise 83.294(f)(i) to add the word "existing" before the word "open" to clarify that this setback only relates to open sinkholes that exist at the time of manure application. 195

To be consistent with federal regulations for CAFOs, Pa's regulations must include a 100-foot setback from sinkholes, regardless of whether or not manure is incorporated. Why was this federal requirement not included in the original proposal? (83.294(f)). 196

Response: The setbacks in the final form regulation have been revised to be consistent with EPA's CAFO regulations. This includes a year-round 100 foot manure application setback, or 35 foot buffer, from a sinkhole. This sinkhole setback is also consistent with the general setback standard provided in Act 38.

Consistent with the above comment, the final form regulation specifically states that the setback from an open sinkhole relates to those that exist at the time of application.

64. Comments:

Section 83.294(f)(iii) – remove the word "open". It should not make any difference if the well is "open". 198

Subject all manure applications to a 100' setback from a well, regardless if the well is active or not. 4

Require a 35' buffer from an inactive well, not 100'. 7. Support the new setback of 100 feet from inactive drinking water wells. 194

Response: The final form regulation eliminates the inactive well restriction due to the minimal pollution risk associated with applications near an inactive well.

Manure applied adjacent to an inactive well does not create the same risk of pollution, as an application adjacent to an active well. This is due to the cone of depression that is formed around an active well, where materials applied in

the near-well area are drawn into the water source. An inactive well does not create that same level of risk because it does not draw pollutants toward the water source.

65. Comment: The NMAB is concerned about wetlands being listed as one of the areas included for manure application setbacks because of the lack of understanding of what is considered a wetland. The NMAB is concerned about who is qualified and available to delineate areas thought to be wetlands, and what the cost of that effort would be. The program will need a firm, defensible definition of what is a wetland in order to make this requirement work. The following is a recommendation made by the a subcommittee of the NMAB:

Wetlands: Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs or other similar areas.” As stated in 25 Pa. Code Section 93.1 and Section 105.1, and referenced by Section 105.451 (Identification and delineation of wetlands – Statement of Policy) and Section 105.452 (Status of prior converted cropland – Statement of Policy). 195

Response: The final form regulation addresses the NMAB’s concern by identifying a practical and identifiable subset of wetlands to be addressed by setbacks. These wetlands are those that are identified on the National Wetlands Inventory maps. This will allow for easier and more consistent wetland identification for nutrient management planning purposes. This will eliminate the need to have wetland professionals assess the approximate 1 million acres that will be subject to manure application setbacks.

Other Setback Details

66. Comments: Neither the SCC nor the conservation districts should be able to waive manure application setbacks. [111] The 100’ well setback should be waived if an adjacent property owner places a new well within 100’ of a working farm. [7]

Response: The regulations do not allow waivers from manure application setbacks or buffers.

The Commission considers active water wells to be a direct conduit to groundwater, which is the primary source of drinking water in rural parts of the state. These near well areas need to be protected, regardless of when the well was drilled. The Commission would encourage other entities having the authority to address the placement of wells, to consider restricting water well placement near working farm fields.

67. Comments:

Manure should be incorporated within 24 hour. [158] Manure incorporation should not negate the setback requirements. [150, 141]

Response: Requiring the incorporation of manure would disallow certain preferred Pennsylvania farming practices that negate or minimize the disturbance of the soil, such as no-till farming. The incorporation of manure is contradictory to these soil protection practices as it generally disturbs soil residue cover, which can enhance erosion and nutrient runoff. Also, manure application on growing sod, such as haylands and pastures, is an excellent practice which minimizes runoff of the applied nutrients, while ensuring immediate uptake of those nutrients in the existing crop. Minimal disturbance incorporation of manure on growing sod is an evolving science and is still being studied and perfected.

The Commission agrees that manure incorporation should not negate the setback requirements, and this has been removed in the final form regulations, consistent with the comment.

Commercial Fertilizer

68. Comment: Is commercial fertilizer use permitted within the 100-foot setback, and is so, why? (83.294(f)). 196

Since there is no prohibition of applying fertilizer within 100 feet of a well, the Commission should re-evaluate the imposition of manure application restrictions. 191

Response: The Commission provides the manure application setbacks recognizing the inexact nature of manure applications, relative to fertilizer application. For instance, manure application equipment has limitations to its ability to apply a precise amount of manure within a given area. In addition, the specific nutrient content of manure is somewhat inexact even when tested using appropriate methods and laboratories. Additionally, the ratio of the various nutrients in manure is generally not consistent with the nutrient need ratio of the crops, as can be addressed using chemical fertilizers. Also, manure application timing is more difficult to coincide with crop planting dates and therefore the risk of loss to the groundwater may be increased.

Commercial fertilizer is able to be applied at times more closely associated with the time the plants will be utilizing the nutrients. Commercial fertilizer blends have a more precise analysis and a more customized nutrient content and therefore a lower level of risk of over-application of any particular

nutrient. Lastly, commercial fertilizer is sold in a form that is less susceptible to runoff.

All of these factors weighed into the Commission's decision that manure applications require additional restrictions compared to the higher degree of precision afforded by chemical fertilizer applications. The same factors justify fertilizer application within setback areas.

Bare ground/Cover crops

69. Comments:

Support the prohibition of manure application on "bare ground". 8, 10, 35, 17-110, 112, 113, 128, 130, 132, 144, 157, 159, 160, 161

Support the revision to 83.404 requiring a cover crop on low residual fields. 10

Would the SCC ever consider a corn silage field with less than 25% cover as appropriate for manure application (83.294(f)(ix)). 4

The cover crop standard is not achievable in all regions of Pa, nor in some no-till situations (83.294(f)(ix)). What alternative practices would be acceptable to the Commission? 4, 7, 156

Would alternative incorporation methods (such as minimum tillage) be acceptable where cover cropping is not successful (83.294(f)(ix)). 4, 156

The SCC should detail other practices that will be accepted when cover cropping on low residue fields is not possible. 7

Response: The final form regulation continues to include the provision requiring restrictions on the fall application of manure on low residue fields. The restrictions apply unless a cover crop is planted or the manure is incorporated using practices consistent with no-till farming.

The Commission has included additional flexibility in the regulations, however, to address fall manure applications on bare ground. Specifically, the final form regulation allows for restricted tillage practices, meeting no-till standards, to incorporate fall applied manure on low residue fields. See § 83.294(f)(5). Manure incorporation practices must also be consistent with the Agriculture Erosion and Sediment Control Plan for the operation.

Manure applications to these sites in the spring are acceptable as long as a crop will be planted that growing season.

General Manure Application Rates

70. Comments

Do not include soil nitrogen residual values when determining proper application rates for pastures. [115] Specific equipment application rates should be included in NMPs, and should be in compliance with N and P recommendations in the soil test. [158]

Nutrients being “uniformly applied to fields” precludes the precision application of nutrients. 198

Allow for a statement of calibration and documentation of calibration standards in the plan to ensure reviewers that calibration is taking place for all application equipment used (83.294(c)). 4

Manure application rates must be linked to tangible reductions in nutrient loading in streams and rivers. 142

Response: The process for determining manure application rates has been established based on decades of agronomic and environmental studies carried out by Pennsylvania Universities, such as Penn State Department of Agronomy. The process used for developing these rates is based on maximizing nutrient uptake by the crops and minimizing any nutrient losses to the environment.

Soil test recommendations in § 83.292 relate primarily to the agronomic need of the crop. In the case of nitrogen, the rate listed as the soil test recommendation is the environmental rate for the site and the plan is developed in compliance with that recommendation.

In the case of phosphorus, which can bind tightly to soil particles, the soil test recommendation is not appropriate to use as an environmental test. Instead, the phosphorus considerations contained in § 83.293(b) (and used in the Phosphorus Index) provide the appropriate environmental analysis of the proposed application for the given site. For instance, the Phosphorus Index assesses the soil test level of phosphorus, in combination with a number of other parameters that affect the phosphorus loss potential of the site.

Residual nitrogen from the decomposition of prior manure applications is a major contributor of nitrogen to pastures. This factor must be included in the analysis of proper application and stocking rates to ensure that excess nitrogen will not negatively impact local or regional surface or ground water resources.

Specific equipment application rates are required to be included in the plan. The final form of the regulation requires that appropriate equipment

calibration be completed prior to plan submission and that this documentation be maintained on the operation for examination by the plan review specialists. The regulation also requires a statement regarding proper calibration, as suggested in the comments.

The Commission agrees that the proposed language “uniformly applied to fields” precludes the precision application of nutrients. This has been removed in the final form regulation.

Liquid Manure Application Rates

71. Comments:

All liquid manure application rates should consider the soil’s infiltration rate and water holding capacity. 3, 111, 158

Support requirement that liquid manure not be applied beyond the soil’s water holding capacity. 6, 194

All liquid manure application rates should be evaluated based on the potential of the application to pollute streams and ground water, regardless of the application method (83.294(e)). 3, 111

Response: The final form regulation continues to consider soil water holding capacity associated with the application of high volume liquid manure applications, and manure applied through an irrigation process.

The regulations address runoff considerations of all application sites. Any proposed application on a field is reviewed by trained and certified reviewers to determine if the proposed application is likely to runoff the field. If it is, then the reviewer will require the rate or method to be appropriately adjusted.

72. Comment: As the demand for increased regulations on manure application increases, it appears that little to no consideration is being given to the crop needs. 129, 139

Response: The regulations continue to allow a farmer to meet the nutrient needs of the crop. The program may disallow manure to be applied in certain circumstances, but in these cases either existing levels of the nutrient in the soil can provide for the necessary crop needs, or chemical fertilizer is generally acceptable to be used to meet the nutrient needs of the crops.

BMPs

73. Comment: Do not include BMPs that are not related to nutrient management in nutrient management plans (such as woodlot management, wildlife management, etc.) (83.272). 115

Response: Agree. The regulations do not require these types of BMPs to be included in the plan.

Manure testing

74. Comment: Annual manure testing for each manure type can be expensive, can a less costly requirement be considered (83.211(b)(3)(iii)). [115, 120, 137, 192, 198] Annual manure testing is excessive. Once a consistent result is determined, a new test should not be required until changes are made on the operation. [7] Recommend manure testing every three years or sooner when significant management changes occur affecting a manure group. Testing all manure groups annually would be unnecessarily burdensome to operators. (83.291, 83.342, 83.452). [137] Annual averages of manure analyses should be used in NMP development. [192] Annual manure testing seems excessive. Requiring a new manure analysis upon a change in management seems more reasonable. [198]

How did the SCC determine that annual manure testing is an appropriate testing interval? (83.342(b)(2)). 196

Response: The Commission considers manure analysis, along with soil testing, as core elements of a nutrient management plan properly tailored to the individual farm.

Staff from the Commission, the Commission's partnering agencies and the Nutrient Management Advisory Board have evaluated testing data from various facilities to determine the affect of an annual requirement as proposed. Based on that analysis, they determined that the most practical and effective method to assess nutrient content of manure produced on the operation is to test the manure annually. Application rates can then be based upon the average of those tests over time.

To test at a longer interval would allow for misapplications of nutrients for up to 9 years until revised manure nutrient content figures, possibly due to new feed and manure management techniques, would be incorporated into the plan.

An annual test allows the operator to track nutrient fluctuations in their manure based on variations in farm-raised and imported feed. Feed management efforts are increasing dramatically and annual testing will allow the plan to properly reflect the affects of these feed and crop management

changes. A majority of the swine and poultry operations in the state already test their manure annually.

The Nutrient Management Advisory Board discussed this issue at length and concurred that the most practical and effective method for tracking manure nutrient content on an operation is to require annual testing.

In the final form regulation the Commission has included certain exclusions to the testing requirement, for “small quantity manure groups,” because of the minimal environmental impact these manure groups have, in relation to the effort and cost associated with this requirement. These exclusions provide financial relief to farmers involved with the program. *See* § 83.292(b)(3)(vi).

75. Comment: How much will annual manure tests cost? What is the basis for requiring them annually? Did the SCC include this cost of testing in its fiscal analysis? 196

Response: See the response to Comment number 74 for the Commission’s rationale for using an annual manure testing requirement.

A manure test costs approximately \$40. The majority of the CAO operations are swine or poultry operations, since modern animal management systems for these operations generally leads to higher animal density on the operation. A normal swine operation, with a below the animals manure storage would require one test per year based on these new requirements. Therefore, a regulated swine operation would spend \$40 annually on manure testing. A poultry operation would have relatively the same annual manure testing costs.

Also, even though it is not currently required in the regulations, a majority of poultry and swine producers already perform annual manure testing to ensure that manure application rates appropriately reflect the evolving manure nutrient content on the operation.

A very small portion of the dairy farms in Pennsylvania are regulated under this regulation. The small sector of the dairy industry that is high density would require generally more manure tests per year than explained above for swine or poultry operations. A common dairy operation may require 3 or 4 manure tests a year. This could cost these operations up to \$160.00 per year.

The final form regulation provides financial assistance to operations to fund the cost of these tests, in order to minimize any negative financial affect this may have on the operation.

76. Comment: The SCC needs to define “similar operations” (83.291(b)(3)(ii)) for determining nutrient content of manure for proposed operations. Liquid manure is too variable to utilize this in nutrient management planning. 115, 120

Response: The Commission agrees with the comment, and the final regulation has incorporated further clarification on what is considered a “similar facility.” This criteria outlined in the regulations takes into account issues relevant to modern animal production systems such as housing, feeding practices, and wastewater management.

77. Comment: Manure analysis should not need to include ammonium nitrogen (NH₄-N) 83.291 (b)(3)(i), 83.401(b)(3)(i). 127

Response: The Commission disagrees with this comment. This testing component will allow for a more accurate residual nitrogen calculation. The residual nitrogen value for manure is extremely variable due primarily to differing manure handling procedures which affect the amount of ammonium nitrogen in the manure when it is applied. This test result will allow a farmer to more accurately determine the amount of available nitrogen for the crop.

78. Comment: Are “accepted manure sampling and chemical analysis methods as specified by the SCC” found in the regulations? A cross-reference to these sampling and chemical analysis methods should be added to the regulations (83.291(b)(3)(i)); (83.401(b)(3)(i)). 196

Response: The Commission agrees with the general idea in this comment that basic criteria should be established in the regulation, and changes to that effect were made in the final regulation. *See e.g.*, § 83.291(b)(3). NMP operations are then given the option of following the preferred guidance document, such as the Pennsylvania Agronomy Guide.

79. Comment: The Commission should develop a protocol of sampling manure deposited in pastures, since the nutrient content will differ greatly with the time since deposited. (83.291(b)(3)). 130

Do samples of manure deposited on pastures need to be collected and analyzed (83.342(b)(4)? 115, 120

Response: The Commission has provided an exclusion from the testing requirement for these manures to address the practicality of this effort. The final form of the regulations allows for standardized book values to be used to represent manure deposited on pastures.

Manure management and storage requirements

80. Comment: Manure storage setbacks should be from property lines and all waters of the Commonwealth including wetlands and intermittent streams. [3, 134, 144, 157, 159, 160, 161, 199] Section 83.351 must be changed to require setbacks

from all conduits to surface waters. [134] Use the DEP definition for wetlands and intermittent streams. [3] Include manure application setbacks from wetlands, intermittent streams, and sinkholes. [35, 17-110, 112, 113, 128, 132]

Response: The current manure storage setbacks from property lines remains in the final form regulation. The scope of the setbacks expanded from the proposal to include intermittent streams, and, similar to the setbacks for land application in § 83.294, wetlands identified on the National Wetlands Inventory map that are in floodplains for exceptional value streams. *See* §§ 83.351(a)(2)(v)(B) and 83.351(a)(2)(vi)(B).

81. Comment: There should be no waiver from manure storage setbacks, including a private well. [3, 134, 150] A CD Board or the SCC should retain the right and utilize their ability to grant waivers from the setback requirements for manure storages. [190] Oppose taking away the conservation district's or SCC's authority to waive a property line setback for a new manure storage. [7]

Response: The final regulation retains the authority of the Commission or conservation district to grant certain waivers used in the proposed regulation for setbacks from streams, rivers, etc. This now includes wetlands which were added to the scope of the waiver in § 83.351(a)(2)(vi)(B). Neither the proposed or the final regulation allows waivers for wells or drinking water sources.

These manure storage setback waivers are only considered relevant in situations where an existing facility is proposing new construction or the repair of a facility, where addressing a setback would be impractical. The manure storage waiver is only allowed where additional conditions are met to protect the water resources under consideration. A thorough analysis of the farm layout and proposed construction is completed prior to making a decision on a proposed waiver.

The final form regulation does remove the district's and the Commission's ability to waive a property line setback, but the regulation continues to allow the adjoining landowner to waive the property line setback. This is an issue of addressing a possible nuisance to an adjoining landowner, not a water quality issue. In that light, Commission or district involvement is not needed; this is an issue between the farmer and his neighbors.

82. Comment: Manure storage setbacks should be the same as the highest manure application setbacks. [152] Prohibit locating a manure storage within 100' of a stream (perennial and intermittent), river, spring, lake, ponds, reservoirs and wetlands. [3]

Response: The manure storage setbacks are generally consistent with the manure application setbacks. In some cases the manure storage setbacks are

more stringent than the application setback due to the increased risk associated with the placement or size of the proposed storage facility.

83. Comment: Plan writers and reviewers are not proficient in designing and locating manure storage facilities, nor determining the appropriate type of storage for a given operation. They should only be expected to assist in sizing a storage and indicating a desired storage duration. (83.311(f)). 115, 127

Response: The final form regulation continues to require the plan to indicate the type, size and location of any new proposed manure storage facility, in § 83.311(d)(1). Planners may not be proficient in the actual detailed engineering design of manure storage facilities, but the Commission fully believes that they are capable of working with a farmer to select the type and volume of storage needed to address the manure generated on the operation. Given the type and storage volume of the manure storage, a planner can easily determine the necessary dimensions of the proposed facility.

Once the basic storage approach is decided, the planner can then work with the farmer to determine the most appropriate location for the proposed facility. An engineer would only need to become involved once the operator moves into the implementation phase of the approved plan .

84. Comment: Clarify that “temporary manure stacking areas” are only used for emergency situations and manure may not be in these areas longer than 30 days.
6

Response: The term “temporary manure stacking area” has been renamed to “emergency manure stacking area”, consistent with the comment. The final form regulation requires that certain criteria be met for these areas, and provides a time limitation of 60 days for these emergency manure stacks to remain on the area. *See* § 83.311(e).

85. Comment: When is a permanent manure stacking area required? 83.311(a)(6).
127

Response: Other than the time limitations and other criteria used for emergency stacking areas (see §§ 83.294(h) and 83.311(e), respectively), there is no general answer to this question. This is an operation-specific determination that is decided during the development of the nutrient management plan. There are many options open to a farmer in how he will manage manure generated on the site, and a permanent manure stacking area is one of those options that may be chosen.

86. Comment: When BMPs are constructed on an operation, the operator should provide a copy of the O&M plan and design to the conservation district. These items should not become public information, 83.311(d). 127

Response: While the O&M plan is a necessary tool for the operator to ensure that the facility is used to its maximum potential, the submission of these documents is not considered to be necessary for approval of the plan. The additional required paperwork would not benefit the program.

In order to ensure that the practices are being implemented as designed, O&M plans and designs can be viewed by program staff during the annual CAO site visits or status reviews.

87. Comment: The water quality protection requirements of 83.351, the Manure Management Manual, and the Pa Technical Guide should be cited so they can be referenced without having to read the entire documents. (83.311(i)). 196

Response: The Commission agrees with the general idea in this comment that basic criteria should be established in the regulation, and changes to that effect were made in the final regulation. See e.g., § 83.351(a)(1). NMP operations are then given the option of following the preferred guidance document, such as the Pennsylvania Technical Guide.

However, the criteria outlined in these documents is very extensive and would be too lengthy to include in this regulation. The Pennsylvania Technical Guide alone consists of four large three-ring binders of technical information, much of it pertaining to water quality. Also, the Manure Management Manual and Pennsylvania Technical Guide criteria are revised periodically to address advances in technical knowledge. These documents serve as the industry and federal and state programs' standard for designing and constructing agricultural BMPs.

In order to ensure consistency between the regulations and these evolving technical documents, the regulations reference these documents as preferred approaches, and do not attempt to include all the information in their current versions.

88. Comment: Would section 83.311(e) take into account municipal zoning and subdivision and land development ordinances? – 194

Response: Nutrient management plans submitted for Act 38 approval are to be written and reviewed consistent with the requirements established in this regulation. This regulation does not require consideration of local ordinances. It is up to the local municipality to review and act on a proposed new animal operation, addressing its requirements under their local ordinances.

NMA Enforcement

89. Comment: Nutrient Management Act enforcement efforts need to be strengthened. 61, 146, 150, 158

It is essential that sufficient enforcement be provided for the implementation of these regulations or they will do little to correct the real and perceived problems caused by these facilities. The Commission must have the resources (staffing and funding) to fully enforce these regulations, to impose necessary fines and the ability to require violators to clean up environmental damage that they have caused at their own expense, not with taxpayer funds. 61, 146, 150, 158, PSATS

The SCC needs to implement a coordinated effort with DEP and PDA to increase oversight and enforcement of the Nutrient Management Act. [3] PDA staff should be the frontline field presence for Nutrient Management Act compliance issues. [115]

Response: The Commission is hiring two additional enforcement staff with the implementation of the new regulations. These additional staff will allow the Commission to fully implement the enforcement provisions of the final form regulation. Program administrative, oversight and monitoring staff at the conservation district level has been increasing as well. Funding for the districts is proposed to increase approximately 50% over several years in order to provide heightened monitoring and enforcement efforts and to address the enhanced regulatory requirements that the districts will be expected to administer.

The Commission is charged with administering and enforcing the program, with assistance from conservation districts. The Pennsylvania Department of Agriculture is not given that general program enforcement authority under the act, but the Department of Agriculture is charged with administering and enforcing the Nutrient Management Specialist Certification program and the Manure Hauler and Broker Certification Program.

The Commission is working cooperatively with DEP and PDA to monitor and take action on CAOs throughout Pennsylvania. The DEP regional and state offices work with Commission staff closely related to farm environmental problems. PDA provides the Commission with significant resources from their legal staff as well as program staff to help the Commission fully oversee and enforce the provisions of the Nutrient Management Act.

90. Comment: Nutrient management plan reviews should be done by conservation district staff during their annual status review. Planners will need to make any necessary amendments or updates to the plan (83.362). 115

Response: The final form regulation requires planners to follow a standard plan format. The standard plan will be provided in computer format. This

program revision will provide for easier development of plans as well as quicker review times, and speedier approvals. The Commission believes this revision will vastly simplify the planning and review process, thus addressing concerns relating to a potentially prolonged plan review process.

91. Comment: Previous violators of the Nutrient Management Act should be required to have a revised nutrient management plan within 30 days of the effective date of the new regulations. 8

Response: The Commission believes that program violators that have met their enforcement obligations and come back into compliance with the regulations should not be singled out as continuing violators. The Commission believes that this requirement is unnecessary.

92. Comment: Additional authority must be established to provide additional safeguards against bad actors. 8

Response: The program requires additional oversight by the conservation district and Commission staff for those operators that are found to continually violate this regulation. The Commission has observed that this increased oversight, along with enforcement efforts for those that refuse to maintain compliance, is effective in addressing “bad actors”.

93. Comment: Include a cross reference to the Section of the regulations containing the penalties that operators and specialists will be subject to if they include false information in a plan that they sign (83.261). 196

Response: The regulations do not mandate penalties for false information. This is simply a reference to existing state laws which address falsified information.

Exported manure requirements

94. Comment: Support closing the “export loophole”. 8, 17-110, 112, 113, 128, 132, 157, 159, 160, 161, 199, 197

Support the requirement for careful planning, tracking and handling of manure that is shipped from one farm to another. 130

Support the more stringent regulatory standards for the exportation and land application of manure. Believe farmers have been applying manure to importing land responsibly but, these new standards will provide the necessary documentation to demonstrate that farmers are exporting manure responsibly. 10, 12

Support the requirement that manure importers either comply with the 150' manure application setback or develop an approved nutrient management plan. 3, 111, 192

Setbacks alone cannot be used to adequately control phosphorus pollution on importing sites (83.301(g)(1)(3)). 3, 111

Response: The final form regulation has addressed the manure export issue extensively through the inclusion of Nutrient Balance Sheets, signed agreements, and the setback requirements. *See* §83.361. These requirements have all been revisited in the final form regulation to effectively address both nitrogen and phosphorus and to more effectively address manure application setbacks from areas of concern. This approach, addressing both nitrogen and phosphorus in the Nutrient Balance Sheet, will provide the desired oversight and restriction of exported manure to protect water resources, while doing it in a manner that provides flexibility to the importing farm in how they choose to address nutrient considerations related to the imported manure.

The final form regulation also ensures that manure handled through a broker is not lost to the system; brokered manure will be effectively tracked to ensure proper application.

This approach will not only ensure the appropriate application of manure on importing lands, but will establish consistent record keeping requirements to document the agricultural industry's implementation of water quality protective practices on importing acres.

95. Comment: Support that importing farms will have the same manure application setbacks as the farms where the manure is generated. 10, 12

Importers should comply with all setbacks. 150

Response: The final form regulation includes the requirement that importers follow all the setbacks established in the regulation. *See* §83.301(b)(3). This provision is included, as it was in the initial proposal, to ensure that manure applied on importing sites does not directly runoff into surface or ground waters.

96. Comment: Support assigning responsibility for the proper application of manure to the exporter if he (or his employee or contract agent) applies the manure at the importing site. 3, 111

Response: This requirement remains in the final form regulation.

97. Comment: If a broker simply delivers manure to a site and does not apply it, is the broker still responsible for completing the nutrient balance sheets for these operations? (83.301(b)(3)). 130

Response: Yes. If the manure is to be land applied for crop production, the importer must have either a Nutrient Balance Sheet or an approved nutrient management plan addressing the land where the exported manure is to be applied. These documents will give the importer the proper direction needed to apply the manure consistent with the DEP Chapter 91 manure management requirements, which require a written manure management plan for all operations using animal manure on their agricultural lands.

98. Comment: The revisions to the regulations will put additional burdens on importing operations, thus decreasing their interest in receiving manure from exporting operations. Therefore exporters will have a harder time finding adequate sites to export their manure. 115, 127, 129, 139, 189

Manure transfer requirements should be no more burdensome than the federal standard. Require exporters to retain and maintain manure transfer records and include current nutrient analysis with exported manure, without signed documentation. 118

The only additional record for manure export should be a N-based Nutrient Balance Sheet kept by the importer. 147

Reconsider the 150' setback for importing farms. We should not hinder importing farms unnecessarily. 7

Proposed record keeping regulations related to manure export should be reduced, as they will have a negative effect on moving manure to where it is needed. 147, 156, 192

Response: A decision of the Environmental Hearing Board in April, 2004, determined that the law requires nutrient management plans to specifically address phosphorus as well as nitrogen. Therefore, phosphorus has been added to the Nutrient Balance Sheet process. However, the Commission has been very cautious in establishing regulatory requirements relating to the export of manure, seeking to minimize negative impacts on the distribution of manure generated on CAOs. The final form regulation ensures that the relevant nutrients, nitrogen and phosphorus, are effectively addressed through a Nutrient Balance Sheet process that provides the farmer with the flexibility to choose from various options to address their nutrient import issues. *See* §83.301(c)-(e).

The Commission's Nutrient Balance Sheet requirement is consistent with the existing DEP requirements under Chapter 91. The Nutrient Balance Sheet developed by the Commission provides a streamlined process to develop proper manure application rates and procedures on importing sites, while still providing for the environmental protection required by Act 38.

The importer requirements in Section 83.301 – and hence the Nutrient Balance Sheet requirements in Section 301(e) -- have been revised to not always require a 150 foot setback for operations importing manure without an approved nutrient management plan. This was the primary method of addressing phosphorus loss in the proposed regulation. The final form regulation will provide the operator the flexibility to implement the P Index analysis on the importing fields proposed to receive manure, and therefore eliminating the importer's need to setback manure applications 150 feet from streams or other surface water bodies. This 150 foot setback remains in the regulations for those importing operations that chose to not use the Commission approved P Index to assess these near stream areas for phosphorus loss.

The required signed agreement will streamline the plan review process, providing written documentation that the importer is willing to accept manure on the operation and that they have sufficient lands available to receive the manure.

The Nutrient Management Advisory Board was involved in the development of the final form regulation and they approved this method as providing effective water quality protection in a way that will be practical for the farm community to implement.

The Commission believes that the regulatory scheme provided in the final form regulation effectively addresses water quality concerns associated with exported manure, without unduly impeding the appropriate distribution of manure.

99. Comment: Support the requirement of signed agreements between exporter and importer. 3, 111, 150, 158

The Commission should provide a standard manure exporting agreement for use in all counties. 154

Will the importer and broker signed agreements be in place and available for inclusion in the plan, when the plan is submitted? (83.301(a)(1), (b)(1)) (83.391(d)). 196

Response: The final form regulation continues to contain the signed agreement requirement. The Commission believes the required signed

agreement will streamline the plan review process, providing written documentation that the importer is willing to accept manure on the operation and that they have sufficient lands available to receive the manure.

The Commission will be providing a standard agreement for use in the program. This standard agreement is under development at this time and will be ready for use when the regulations go into effect.

100. Comment: Support the inclusion of Nutrient Balance Sheets for exported manure. 150, 192, 198

Nutrient Balance Sheets should include Nitrogen and Phosphorus (83.201, 301(a)(2)(4), (b)(3)). 3, 8, 111, 150, 152, 157, 159, 160, 161, 198, 199

Redefine the Nutrient Balance Sheet to state that it is used to determine proper application rates for exported manure and that it needs to address specifically nitrogen (N) and phosphorus (P). The regulations should provide flexibility to importers in how they address phosphorus management in the Nutrient Balance Sheet by allowing a number of exported manure application options including:

- Limiting applications to P removal and only allow applications to fields with a growing crop, fields with at least 25% cover, or to a field immediately prior to planting a crop; or
- Limiting application to fields within 150' of a stream to P removal and only allowing applications to these near stream fields if there is a growing crop, or if the fields have at least 25% cover, or the fields are to be immediately planted to a crop; and allow an N-rate to those fields greater than 150' from the stream that have a P soil test level of less than 200 ppm; or
- Limiting applications based on the Phosphorus-Index values for the fields where the manure will be applied; or
- Limiting applications based on an approved nutrient management plan for the importing farm. 195

Require balances sheets for phosphorus as well as nitrogen for exported manure. A balancing approach for phosphorus, as well as nitrogen, should be applied to all importing fields. (83.301, 83.292, 83.294). 134

A NMP should be required on any importing operation having its own animals. 198

The SCC should develop and provide sample nutrient balance sheets and agreement forms to ensure understanding and consistency (83.281(d)). 115, 120

Importers receiving manure from multiple sources should be required to develop a NMP. 197

Response: The final form regulation continues to require a Nutrient Balance Sheet or approved nutrient management plan, addressing all the lands where exported manure will be applied for crop production. The Nutrient Balance Sheet will account for all manure and any other nutrient source planned to be applied to the lands where the imported manure will be applied.

The final form regulation ensures that the relevant nutrients, nitrogen and phosphorus, are effectively addressed through a Nutrient Balance Sheet process that provides the farmer with the flexibility to choose from various options to address their nutrient import issues. *See* §83.301(e). Phosphorus is included as required by Act 38, as determined by a decision of the Environmental Hearing Board in April, 2004.

Phosphorus management is addressed in the final regulation by giving importing operations several options. These options, contained in § 83.301(c), require one of the following: (1) application of nutrients according to the phosphorus removal rate and using a 150' setback from streams, lakes and ponds; (2) application using the nitrogen removal rate as long as the application is outside a 150' setback and only if the soil test level for phosphorus is below 200 parts per million, (3) use of the Commission-approved Phosphorus Index; or (4) use of a nutrient management plan approved under these regulations.

The final form regulation has reformatted the Nutrient Balance Sheet requirement similar to the recommendations provided by the Nutrient Management Advisory Board in the above comment. The reformatted Nutrient Balance Sheet specifically addresses nitrogen and phosphorus through any of four options provided to the farmer. The final form regulation differs somewhat from what is suggested in the Advisory Board's comment, in that the first and second options are revised. The final form regulation calls for a 150 foot setback for the P based application in option one, and allows for nitrogen based applications on soils with documented soil test phosphorus levels less than 200 ppm under the second option. The Commission believes that this final form requirement is consistent with the Advisory Board's intent to provide options to the farmer, and does so in a simplistic, effective and practical way.

The Commission will be providing a standard form for these Nutrient Balance Sheets. This development effort is well underway and will be completed prior to the effective date of the regulations.

101. Comment: Manure haulers should not be identified in the plan by name. If the hauler is named, there should be provision for an expedient change, if necessary. 156, 190

Revise 83.301(a)(5) to eliminate the need to document the name of the certified hauler/applicator in the plan (retain the requirement to have the broker's name in the plan). The plan should be required to state that a certified manure hauler will be used, where a commercial hauler is to be used. NMAB. The regulations should require that the hauler's name be listed on the records of manure transfers. 195

A statement that a certified hauler will be used is more workable than the hauler being identified by name. 198

Will the hauler(s)/applicator(s) that will be used for the duration of the plan, always be known at the initial planning time? (83.301(a)(5)). 196

Response: The Commission agrees with the concerns expressed in these comments: The final form regulations have been revised to remove the requirement to list the name of the manure hauler. Instead, the regulation requires the plan to include a statement indicating that any commercial manure hauler used for the implementation of the plan will be certified in compliance with the Commercial Manure Hauler and Broker Certification Law, Act 49 of 2004. See § 83.301(d).

The Commission has made this revision understanding that the hauler used on an operation may not be known at the initial planning time, or the operator may change haulers from year to year based on costs or quality of work. The revision continues to require that only qualified individuals be used for these efforts, and eliminates unnecessary plan amendments as haulers are likely to change over the lifespan of the operation.

102. Comment: Support the requirements for haulers and brokers to have the necessary documentation to show manure is being applied responsibly, and defining more clearly the responsibilities of commercial haulers and brokers. 10, 12

Response: The final form regulations continue to provide these same requirements in order to ensure exported manure is used appropriately.

103. Comment: The regulations should specify where the regulated community can access a list of the approved manure hauler/broker certification programs. The regulations should include citations to those statutory provisions that relate to this requirement. (83.301(a)(6), (b)(2)). 196

Response: The Commission will provide this information in the various program publications and guidance documents, as well as in the training provided to certified planners and in program information provided to conservation districts.

104. Comment: Delete the areas in the regulations where it establishes the SCC developing manure hauler and broker testing and certification requirements and just reference Act 49 (Pa's Manure Hauler and Broker Certification Law) for this certification. (83.301(a)(5)). 195

Response: The Commission agrees with this comment. The final form regulations have addressed this issue consistent with the comment.

105. Comment: Add the word "certified" before the words "manure hauler/applicator" in 83.343(a)(4)(ii) and throughout the regulations. 195

Response: The regulation recognizes that all commercial haulers and brokers in Pennsylvania must comply with Act 49, which contains a certification requirement.

106. Comment: If the importer or broker is no longer used (i.e. the agreement expires or the hauler/broker goes out of business), is the CAO (or VAO) required to formally update the nutrient management plan? (83.301(a)(1), (b)(1)); (83.391(d)). 196

Response: The final form regulations have been revised to indicate that if a new importer is used, the plan needs to be updated with the required Nutrient Balance Sheet and signed agreement, but a formal plan amendment would not be needed until the plan reaches its triennial review, at which time the plan will need to be formally amended to address this change. In relation to the change in a broker, the plan will need to be formally amended upon a proposed change in brokers.

107. Comment: The state, or each CD should have a staff person available to identify land that is available for manure application or manure distribution centers. 129, 139, 140, 162-187, 163, 169, 189

Response: The Commission believes that the exporting operator is the most effective person to provide this effort. The exporting operator has the best knowledge of local farms in need of additional nutrients. Also, the exporter can benefit from establishing good relationships with his importers. The Commission realizes that the effort by exporters to communicate with potential importers and establish these working relationships is important to the long-term success of the export/import arrangement.

108. Comment: A minimum threshold should be established whereby an operation could import manure and not be regulated. 190, 191

There should be a threshold which a farmer can import manure and not have to go through the nutrient balance sheet, nutrient management plan, and record keeping. The Grange is concerned how these new requirements will negatively effect infrequent importers. 7

Allow farmers exporting small quantities of manure to be exempt from the detailed manure exporting requirements. Establish the following quantities as the maximum amount of manure received by a given importer over a year's time that qualifies for this exception: 5 tons poultry manure; 15 tons non-poultry dry manure; 10,000 gallons of liquid manure. Do not require the plan to individually list these small quantity importers, but require that the records document these small quantity transfers. 195

Move 301(g) ahead of 301(f) to indicate that these small quantity exports do not need to follow the setbacks established in these regulations. 195

Response: The Commission agrees with the direction of these comments in that it is important that the regulation provides exclusion for small quantity importers. This is necessary to allow for the practical movement of these small manure quantities to neighbors who wish to benefit from the nutrients generated on site. These small quantity transfers are recognized as posing a minimal potential risk for nutrient pollution. These transfers are also recognized for their potential to develop good will between neighbors as adjoining landowners may wish to benefit from the application of organic nutrient sources to their gardens.

The final form regulation has established this exception for small quantity importers. The exception eliminates the need for these operations to address the documentation described in the regulations (relating to Nutrient Balance Sheets and signed agreements) and the setbacks established in the regulations.

This exception has been provided for those that annually import less than 5 tons of poultry manure, 25 tons of non-poultry manure, and 10,000 gallons of liquid manure. See § 83.301(i).

109. Comment: Does the SCC anticipate that there will be enough exporters to take manure off site for spreading at another location? 196

Response: Yes. The Commission believes there will be an adequate number of manure haulers and brokers to transport manure off site to importing

locations. This is a common practice now and these revised regulations will only enhance that sector of the industry.

110. Comment: What are the options for CAOs that cannot find another location to export the manure? 196

Response: The Commission is working with university and industry leaders to identify alternative uses of manure and to further the utilization of alternative technologies so that farmers will need less land for the application of their manure. The final form regulations provide the opportunity for the Commission to fund efforts to implement alternative technologies on operations having difficulty finding importing sites for the manure generated on their operations.

In addition, the final form regulation provides a 5-year phase in period for most existing operations for implementation of the full scope of the phosphorus management regimen. This provision will provide these existing operations additional time to use existing croplands (home farm and importing acres) for the application of their manure, while they identify and implement alternative technologies that will reduce their dependence on land application of manure but while also meeting new restrictions on phosphorus application that are protective of surface waters. Therefore, the phase in period will require application restrictions addressing both nitrogen and phosphorus, but will provide additional flexibility to these existing operations in the use of their available croplands.

111. Comment: VAOs will be discouraged from participation in the NM program with the same requirements as CAOs concerning manure and nutrient balance sheets, 83.411(a). 127

Response: The VAOs have the same requirements as do CAOs under the final form regulations, but due to the lower animal density of these operations, they generally have an easier time meeting these requirements. For example, based on the records we have from the over 1,300 current VAOs participating in the program, only 3% of the manure generated on VAOs is exported, as compared to over 25% of CAO being exported. Therefore, even though VAOs may have the same requirements to meet for exported manure, it is a very rare for a VAO to export manure and hence, rare for the export provision of the regulation to pertain to a VAO. The phosphorus management issue is similar, where lower density operations generally have lower soil test levels of phosphorus and therefore have an easier time meeting the phosphorus index analysis.

112. Comment: Require that manure exporters purchase manure application easements from those farms that will be importing their manure. 129, 139

Response: This is not required under the final form regulations; however, a farmer and an importer could make these contractual arrangements if they believed it to be in their best interests.

113. Comment: The regulations should identify what qualifies as “other means acceptable to the SCC”. (83.301(a)(5)(i), (b)(1)(i)); (83.411(a)(5)(i), (b)(1)(i)). 196

Response: Agree. This wording has been removed in the final form regulation.

114. Comment: The regulations should specify how “substantial compliance” is determined. (83.301(a)(5)(ii), (b)(1)(ii)); (83.411(a)(5)(ii), (b)(1)(ii)). 196

Response: Agree. This wording has been removed in the final form regulations.

115. Comment: The regulations should specify what the “other requirements” are and where they can be found. (83.301(a)(5)(iv), (b)(1)(iv)); (83.411(a)(5)(iv), (b)(1)(iv)). 196

Response: This wording has been removed in the final form regulations.

116. Comment: Do not require an Erosion and Sediment Control Plan and a Nutrient Management Plan as a prerequisite for receiving exported manure. 122

Response: The final form regulations do not include these requirements. DEP regulations address erosion and sedimentation requirements on all agricultural operations conducting plowing and tilling, including importing sites, in 25 Pa. Code 102.4. In addition, 25 Pa. Code 91.36(b), also administered by DEP, contains the requirement for a written manure management plan. Even though these final form regulations do not require a Nutrient Management Plan on importing operations, they do require the development of a Nutrient Balance Sheet addressing all lands where imported manure will be applied. This written Nutrient Balance Sheet will provide the necessary direction to the importer relating to the appropriate application of imported manure, and is consistent with the requirements under DEP’s Chapter 91 manure management planning requirements.

Plan amendments

117. Comment: The Commission should allow flexibility in NMP implementation with regard to unexpected changes on the operation, such as changes in importers, conservation practices, etc. 129, 139, 156, 162-187, 163, 169, 189, 190

Conservation District technicians should be granted plan approval authority for changes that require immediate action. 156

Changes to an operations list of importers should not necessitate a NMP amendment. There should be provisions to simply notify the CD in the event of importer changes. 156, 190

Allow for flexible plan amendments relating to changing or adding importers during plan implementation, giving conservation district interim approval authority, allowing producers to make these amendments by contacting the conservation district staff and allowing those staff the authority to give verbal approval until the one year plan review is made (83.371(a)(3)). 4

The NMAB is concerned about requiring a formal approved plan amendment prior to the export of manure form instances where the export arrangements change at the last minute, outside of the exporters expectations and control. In these cases, the regulations should require immediate notification to the district or SCC as provided for in Section 83.372 (relating to amendments due to unforeseen circumstances). 195

Response: The Commission agrees with the concerns expressed in these comments. The final form regulations have been revised to incorporate additional flexibility in relation to changes made during the implementation of the plan, such as changes in importers and manure haulers.

The final form regulation will allow districts to receive and verify new importer information (Nutrient Balance Sheets and signed agreements) prior to export to these new importers, without the need for immediate action on a plan amendment. The regulation requires formal plan amendment review and approval during the triennial review, incorporating all of the changes that have been accepted prior to the tri-annual review.

This will allow operators to make immediate necessary updates to their plans without unnecessary delays, while still maintaining effective manure export tracking of these new importers.

118. Comment: A new manure analysis should not require a NMP amendment.
198

With annual manure tests, will a plan update be required each year? What type of variances in manure analysis will require a plan update, 83.342(b)(2)? 127, 196

Response: The annual manure analysis will be incorporated into a running average manure analysis for the operation. This running average manure analysis will be incorporated, as appropriate, into any required plan amendments or updates related to the triennial review or when there is a significant change on the operation.

119. Comment: Additional land brought into the NMP should only require a plan amendment if those lands receive manure. 198

Response: If there are new, non-contiguous lands brought onto the operation, a revision to the plan is not required as long as the land does not receive manure, as the comment suggests. However, if lands at the animal production facility are incorporated into the operation, they are required to be included in the plan through a plan amendment.

120. Comment: The regulations should specify if a plan amendment is required when lands are sold or no longer available for lease or renting. (83.342(a)(8)); (83.481(a)(9)). 196

Response: The regulations do require an amendment in these situations where the change is considered to be significant. Significant is defined in the regulations as a change that would result in a 10% or greater increase in the animal density (Animal Equivalent Units per Acre) designation. This analysis would address situations where significant lands are lost to the operation.

121. Comment: When applicable, allow for the development of a plan that will allow for unexpected alterations and changes in practice. 4

Response: The final form regulation and standard plan format will allow for these changes as appropriate, where they do not hinder the operator or conservation district from directing, monitoring or tracking proper nitrogen and phosphorus applications.

122. Comment: Retain the triennial review by the certified nutrient management specialist. 3

Response: The Commission agrees with this comment. The final form regulation continues to provide for a triennial review by a certified nutrient management specialist, consistent with this comment. See 83.263(c).

123. Comment: The term 'significantly changed' needs to be defined in reference to soil test levels, 83.362(c). 127, 196

Response: This proposed text has been removed in the final regulation.

124. Comment: Clarify in the regulations what documents are intended as “associated fact sheets and manuals”. (83.371(a)(4)); (83.481(a)(3)). 196

Response: This proposed text has been removed in the final regulation.

Horses in the program

125. Comment: Support the inclusion of horse operations in the Nutrient Management Act. 8, 35, 17-110, 112, 113, 128, 132, 134, 147, 157, 192

Support the inclusion of additional operations with the insertion of the livestock definition in the regulations. 2

Response: The final form regulation continues to include the livestock definition in order to permit Commission oversight of all high-density livestock operations, including high-density horse boarding operations. The definition of “farming resources” was revised to further clarify the intent to regulate certain horse operations

Public involvement

126. Comment: Request public notification of any proposed CAO or expansion in the PA Bulletin. 150

Nutrient Management Plan approvals should be published in the Pa Bulletin to give adequate opportunity for public review of approved plans during the 30-day appeal window. 3, 111

Response: Publication of various stages of the nutrient management plan is a matter of policy for the Commission. The Commission is continuing to evaluate this policy.

127. Comment: Supporting documentation should not be included in the NMP, due to confidentiality issues; this information should be provided during the annual review. 156

Allow for the producer to provide supporting documentation during the annual review, rather than in the plan, in order to address the public information issue. 4

Alternative manure utilization record keeping (nutrient balance sheets, manure transfer sheets and export agreements) should not be an official part of the NMP

and should not be considered public documents. They should only be viewed by CD, SCC or DEP personnel. 129, 139, 156, 162-187, 163, 169, 189, 190

Will manure export sheets, nutrient balance sheets, and other paperwork pertaining to the export of manure be considered public information? Recommend that this information not be publicly accessible. 4

Response: Supporting documentation, such as Nutrient Balance Sheets and Export Agreements, is a key element of a complete nutrient management plan. These documents are therefore essential to do a complete and accurate review of the plan. Consistent with Pa's Right to Know Law, a government agency is required to make public information which are essential elements of a decision such as a nutrient management plan submitted submitted for approval. Supporting documentation is used to make that decision; therefore, the Commission is required to provide this information to the public.

The Manure Export Sheet is a record keeping form, not part of the plan submitted for approval and therefore not part of the action made on the plan. These forms are kept on site as part of the implementation of the plan, and therefore they are not available to the conservation district to provide to the public.

128. Comment: The SCC should develop a fact sheet or checklist of what nutrient management program information is available to the public and what is not. 115, 120, 192

Response: This information will be made available through the revised program administrative manual which is provided to all delegated conservation districts. This effort will ensure consistent implementation of the Right To Know Law provisions, statewide.

Record keeping

129. Comment: We believe the additional record keeping requirements will help eliminate loopholes in the current system. (83.341). 194

Response: The final form regulation provides the necessary level of record keeping, including those outlined in the original proposal, as well as certain additional enhancements in response to comments received on the proposed regulation. See 83.341 – 83.344.

130. Comment: Manure application records should be made available to the general public (83.342(b)). 150

Manure application and export records should be submitted to the conservation district quarterly and should be available to the general public (83.342(b)), (83.343(a)(4)). 3, 111, 150

Response: The Commission does not see any benefit to requiring submission of these records. These records will be effectively reviewed by qualified program staff during on-site annual reviews and complaint assessments. These records are not submitted to the conservation districts; therefore, they are not available at the conservation district office for release to the public. Please also see also the response to comment number 132.

131. Comment: How are yields to be measured for pastures (83.342(b)(4)). 115, 120, 198

Response: Pasture yields are estimated based on the best professional judgment of the planner and reviewer. This analysis considers vegetative vigor, stocking rate, management practices and length of the grazing season. This direction has not changed since the inception of the program. The USDA NRCS office has provided assistance to the Commission in developing further guidance to help planners and plan reviewers with this analysis.

132. Comment: Record keeping in the present regulations is adequate for fulfilling nutrient management requirements. The proposed changes treat farmers as criminals in the Chesapeake Bay watershed. 122

Do not make record keeping requirements overly burdensome to the producer because it may inhibit nutrient management efforts. 4

Response: The Commission believes that additional record keeping requirements are essential for the proper monitoring of water quality efforts associated with nutrient application. These records not only allow for necessary state agency oversight, but they also provide the necessary documentation for coverage under the limited liability protection afforded under the law.

The Commission's goal is a program that provides for water quality protection while allowing for maximum program feasibility at the farm level.. The Commission has discussed the issue of record keeping extensively with our interagency workgroup, various industry groups and the Nutrient Management Advisory Board. The input from these various program partners have assisted the Commission in developing the record keeping requirements included in the final form regulations. The Commission believes that the requirements established in the final form regulations appropriately address the Commission's obligation to take a reasonable approach to ensure maximum program effectiveness.

Definition of a CAO

133. Comment: Opposed to placing a lower limit on the CAO definition. 151, 192, 198

Response: The Commission believes there is a need to focus program direction on the larger impact operations—the ones that present the highest risks to the environment; otherwise, it would divert a majority of our critical resources toward small producers which represent a relatively minor impact on the environment. The Commission believes that efforts of other agencies, either local or state, can be more effective at addressing these small scale operations.

Soil testing

134. Comment: Supportive of soil test results being incorporated into the NMP. 154

Soil test results should be required to be submitted to verify Phosphorus-Index values (83.291(e)). 115, 198

Soil test results should be submitted on laboratory letterhead. 198

Response: The final form regulation continues to include a soil testing requirement recognizing the importance that soil testing plays in field-specific nutrient management planning.

The Commission agrees that soil test results need to be submitted with the plan to assist with plan review. The final form regulation requires that the soil test results, the laboratory name, and date of the test, for all fields on the operation be submitted with the plan. Actual test reports will be retained at operation, accessible by program staff.

With this level of soil test record keeping, the Commission does not believe that submission of the actual soil test reports is needed to effectively administer the program.

135. Comment: Support the 3-year soil-testing requirement (83.342(a)(1)). 4

Response: The final form regulation continues to include this three-year requirement in order to track soil levels of phosphorus and potassium over time.

136. Comment: Support language in the regulations concerning requiring testing for both phosphorus and nitrogen content of the soil and manure. 194

Response: The final form regulation requires soil testing to assess the levels of phosphorus, potassium and acidity in the soil. Soil testing for nitrogen is not common in Pennsylvania because of its limited usefulness. Crop yield, and manure and legume cropping history remain the primary factors in developing nitrogen recommendations, since nitrogen levels and forms in the soil fluctuate over time due to biological processes. The Penn State Agronomy Guide provides an overall methodology for determining nitrogen levels in the soil based upon the past cropping and manure history of the given field.

137. Comment: Why can't soil test results for phosphorus be in pounds of phosphorus instead of parts per million (ppm) as required in 83.292(e)(4). 127

Response: The final form regulation will require documentation of the units documented on the laboratory reports, as well as ppm, to be submitted with the plan, consistent with your comment. This will allow the reviewer to ensure that any necessary conversion of the results was done correctly.

138. Comment: Section 83.292(e)(1) includes the phrase "other SCC approved procedures" relating to the procedures that are to be used for the sampling and analysis of soils found on the farm. What are these procedures? Are they located elsewhere in the SCC regulations? The SCC should include a cross-reference to these materials in the regulation. 196

Response: The Commission changed its approach to use of outside references and methods, as explained in the response to comment number 33.

E&S Plan requirements

139. Comment: Support the inclusion of the E&S Control Plan requirement. 35, 17-110, 112, 113, 128, 132, 157, 159, 160, 161

The Commission should require conservation plans prior to NMP approval, or that one be developed within a specified time frame. 192

Response: The final form regulation continues to include the requirement that an operation must have a current Agriculture Erosion and Sediment Control Plan for the operation prior to nutrient management plan approval. Erosion and Sediment Control Plans are a key component to ensuring that particulate phosphorus is not washed into streams by stormwater runoff.

140. Comment: What is expected to happen to those operations that are out of compliance with their Chapter 102 Erosion and Sedimentation Control plan. 115

A conservation plan requirement will cause excessive delays in NMP approval.
192

Response: The final form regulation provides three years for an operation to address the Agricultural Erosion and Sediment Control planning requirement, or the operator's nutrient management plan will not be approved. This timeline for meeting the erosion and sediment control planning provision of this regulation will ensure that these erosion control plans can be developed in time to minimize any delays in districts taking action on nutrient management plans. This effective date provision does not affect the legal requirement to comply with Chapter 102; it only addresses verification during the nutrient management plan approval process under Act 38.

141. Comment: Including the requirement for E&S plans could cost the farmer more money for additional BMPs. 154

Response: The Commission, through this regulation, is simply linking the nutrient management program with the existing DEP Chapter 102 requirement. These final form regulations will impose no additional or new requirements of the regulated community relating to erosion and sediment control. This final form regulation has been developed recognizing that meeting the existing Chapter 102 erosion and sediment regulations will significantly address phosphorus losses on the operation.

142. Comment: There is a lack of trained and certified conservation planners, and a backlog of farms waiting for conservation plans in many counties, 83.321. 115, 127, 192

Response: The Commission recognizes this shortfall in the number of individuals currently trained and authorized to do erosion and sediment control planning in Pennsylvania. Therefore, Commission is providing a three-year timeframe to begin implementing this program link on most existing operations. The Commission also recognizes that the Natural Resources Conservation Service is currently implementing efforts to train and certify additional staff, including private sector specialists, in the development of plans addressing erosion and sediment control.

143. Comment: Who is required to approve conservation plans (83.272)? 115

Will an operation that has an existing conservation plan meet the requirements of Chapter 102? 192

What level of approval and oversight is required for the E&S plan verification (83.321(e)). 4

Response: The DEP Chapter 102 regulations establish Agriculture Erosion and Sediment Control Plan requirements for the agriculture community, addressing all plowed and tilled agricultural lands. The Chapter 102 regulations, administered and interpreted by DEP, establish how these erosion control plans are to be developed, reviewed, implemented, monitored and enforced, not the Commission; therefore, DEP can best address these questions.

144. Comment: The SCC should specify who “others with expertise with nutrient runoff control” are and to what level of expertise is required. (83.321(a)); (83.421(a)). 196

Response: This phrase is not a regulatory requirement. It is pulled directly out of the Chapter 102 regulations, relating to whom DEP has authorized to develop these plans. The DEP would be the best agency to respond to this question.

145. Comment: The term “Plowing and Tilling”, as used in the “Conservation Plan” definition, should be further defined. 198

Response: This phrase has been eliminated from the final form regulation, along with the definition of a “Conservation Plan”.

146. Comment: Conservation district resources need to be adequate to ensure that the checking of the E&S verification does not hold up the nutrient management plan approval process (83.321(e)). 4

Response: The resources to administer the Chapter 102 Erosion and Sediment Control program are provided by DEP through the Chapter 102 delegation agreement.

147. Comment: An E&S plan should be defined as one that “reflects current farming practices and has been reviewed within the last five years”. 198

Conservation plans have different requirements based upon different USDA programs. There should be a definition specified as related to Act 6. The conservation plan should be required to meet the minimum standards. 197

Response: The nutrient management final form regulations require nothing in themselves relating to content of Agricultural Erosion and Sediment Control Plans. These regulations simply state that an operator must be in compliance with the Chapter 102 Agriculture Erosion and Sediment Control Plan requirements prior to nutrient management plan approval.

148. Comment: Will conservation plans or E&S plans need to be implemented or just developed and/or approved? 192

Does an E&S plan need to be approved, up-to-date, and implemented before a nutrient management plan can be approved for an operation (83.321(e))? 4

Response: Operators will need to be in compliance with Chapter 102 Agriculture Erosion and Sediment Control requirements. This will necessitate the development of Agriculture Erosion and Sediment Control Plans in accordance with Chapter 102, and that these plans are implemented on schedule. The Chapter 102 program staff at the conservation district level will ensure that the operation has met this requirement.

Maps

149. Comment: Complete, concise and accurate maps are important for the implementation of the plan (83.281). 4

Response: The Commission agrees with this comment and has enhanced the mapping requirements as specified in the final form regulation.

150. Comment: Why are topographic maps required. Topo maps are too small a scale to be accurate, unless they can be related to a photograph. (83.281(b)). 115, 120

Response: Topographic maps provide an excellent resource for determining the direction of flow of runoff to surface waters, as well as the general volume or intensity of that flow relating to slope, slope length and watershed size.

151. Comment: Topographic maps should have a minimum scale, so as to be usable by the farmer, as well as the reviewer. 197

Response: The Commission has not required a specific scale. Such a requirement would prevent planners from resizing the map relevant to the size of the operation. Providing for the resizing of the map allows for it to be more easily incorporated into the overall planning document.

152. Comment: The location maps included with a NMP should include road names and distinguishing landmarks. 83.281 (b)(1). 127

Response: Agree. The final form regulation has been revised to require the plan map to include road names.

Definitions

153. Comment: In the definitions, “Perennial Stream” and “Surface Water” still allow room for varied interpretations. 4, 130, 156, 162-187, 163, 169, 192, 197

The definition of Perennial Stream: Surface Waters should be defined as ‘Named Streams’, therefore avoiding the potential for someone to define a diversion ditch as a stream. 129, 139, 140

The term “surface water” is too broad to be used in the setback language of the NMA. 7, 190, 191

The terms “wetlands, springs & seeps” within the “Surface Water” definition are extremely broad; there is too much difficulty in making such determinations. 191

Does the definition of Surface Waters include seasonal high water tables or road ditches? (83.201). 130

Response: The Commission agrees that the definitions of surface water and perennial stream were not specific enough to properly address the issues under this regulation. The final form regulation has been revised to address these concerns through the redefinition of both perennial and intermittent streams and the elimination of the surface water definition and reference, where relevant. *See* 83.201.

The Commission considered referring only to named streams but realized that this may limit the ability of the program to properly protect relevant water bodies. The definitions for perennial and intermittent streams, included in the final form regulation is consistent with that used in other related state regulations.

154. Comment: All terms that could have different interpretations by different parties need to be specifically defined as to their use in Act 6, or be consistent with definitions used by other entities. 192, 197

Response: Agree. The final form regulation attempts to address this concern.

155. Comment: State that the nutrients being addressed in this regulation are specifically N and P. Do this in the definition of nutrients and ensure that the regulations are consistent with this focus throughout. 7, 157, 159, 160, 161, 190, 191, 195

Response: Agree. The identification of nitrogen and phosphorus as the nutrients of concern has been addressed in the final form regulation consistent with this comment.

156. Comment: Does the term “Concentrated Water Flow Areas” include state or township road ditches? 83.201. 130

Response: Yes. These are not streams, but they are concentrated water flow areas.

157. Comment: The term “animal units” is used rather than AEUs in Chapters 83.291(b)(2) and 83.401(b)(2). Why? 191, 198

The “manure produced” calculation was changed from AEUs to animal units. Animal units (AUs) are not defined in the regulations. 198

Response: The Animal Unit (AU) term is used for calculating manure generation by a particular animal species. The Animal Equivalent Unit (AEU) term is not used for that purpose. The AEU differs from the AU term in that AEU is an annualized term taking into account those times of the year that animals are not on the operation; an AU is not annualized. The final form regulation includes changes in the definitions for Animal Unit and AEUs, to clarify this distinction.

158. Comment: Biosolids should be defined in the Act 6 regulations. 197

Response: Biosolids is a term appropriately defined in DEP regulations and is therefore not required to be defined in this regulation. As DEP may in time redefine biosolids, there would be an issue with consistency if this regulation separately defined the term.

159. Comment: Pastures could be harvested by animals and haying. 198

Response: Agree. The final form regulation addresses this concern by including haying as a method of harvesting a pasture, if it is done in combination with animal harvesting.

160. Comment: Does manure being “applied” and “deposited by livestock” mean the same thing? 198

Response: No. Manure “applied” refers to mechanical application by humans; manure “deposited by livestock” refers to direct animal-application of manure by grazing animals.

161. Comment: In the “*Existing Agriculture Operation*” definition, how will an owner know when a “significant increase in scope or magnitude of the operation” has occurred? The regulation should specify the criteria the SCC will use to determine what qualifies as “significant”. 196

The Commission should investigate the “existing use” definition on the DEP website when identifying agricultural operations and acreage. 198

Response: The “Existing Agricultural Operation” definition has been eliminated from the final form regulation.

162. Comment: In the “NBS” definition, why is phosphorus not referenced?
196

Response: Agree. The NBS definition has been revised to more generally describe the purpose of the nutrient balance sheet. Section 83.301 of the final form regulation has been revised to explicitly outline that the nutrient balance sheet will address both nitrogen and phosphorus management.

163. Comment: The first sentence of the definition of Nutrient Balance Sheets should be broken down into several discreet sentences. (83.201). 130

Response: This definition has been revised in the final form regulation.

164. Comment: In the “NBS” definition, the final regulation should cross reference the section of the SCC regulations that contain “procedures acceptable to the SCC”. 196

Response: This phrase has been eliminated in the final form regulation.

165. Comment: The regulations need to define ‘Emergency Stacking Areas’. (83.201). 127

Rename ‘Temporary Stacking Areas’ to ‘Emergency Stacking Areas’. 195

The first sentence of the definition of ‘Temporary Manure Stacking Areas’ should be broken down into several discreet sentences. (83.201). 130

Response: Agree. The final form regulation has been revised to incorporate these comments.

166. Comment: The regulations need to delineate between ‘Temporary Stacking and Permanent Stacking areas’. When does Temporary become Permanent? (83.201). 127

“Temporary manure stacking areas” should only be used for emergency situations and should not for longer than 30 days. 35, 17-110, 112, 113, 128, 132

Response: The final form regulation renames the “Temporary Manure Stacking Areas” to “Emergency Manure Stacking Areas” which will eliminate the confusion relating to these comments. The final form regulation also establishes a 60-day limit for these areas.

167. Comment: Clarify the “in-field stacking” definition. 4

Response: The final form regulation includes a revised definition to further clarify this program provision.

NMP review and approval

168. Comment: Support not providing for conservation districts or the SCC to modify a plan (83.361(b)). 4

Response: The final form regulation continues to disallow this practice by the Commission or the conservation district.

169. Comment: The 90-day time frame for reviewing NMPs seems to be unrealistically short with the inclusion of P-indexing, site visits and importing operations, 83.361(e), 83.471. 127

Response: The final form regulation provides an initial 90-day review period. If no action is taken by the conservation district within that timeframe, the operator may begin plan implementation; however, this does not guarantee that the plan will be ultimately approved, and the plan will not be deemed approved until a second 90-day period (or a total of 180 days) has elapsed.

170. Comment: CAOs should not be hindered from operating or expanding if NMP submission and approval criteria cannot be met due to a third party not completing review in a timely manner. 156

Response: The final form regulation continues to allow an operator to begin implementing the plan 90 days after submission if no action has been taken by the plan review authority. However, this does not guarantee that the plan will be ultimately approved.

The final form regulation also includes revisions to the manure hauler and the manure importer requirements. These provisions will allow for necessary changes relating to haulers and importers, without the need for an immediate plan amendment, which could restrict operators from implementing their plans in Pennsylvania.

171. Comment: The 3-year time frame for CAOs to implement a NMP should be extended if the operator is working with CD and NRCS staff or private sector engineers with design and implementation of the BMPs listed on their plans, 83.362(a). 127

Response: The conservation district or Commission is provided the discretion to allow for a plan amendment, calling for an extension to the plan implementation timeframe, if an extension is warranted.

Financial assistance

172. Comment: Support the revision to section 83.215 to allow for funding to amend an already approved nutrient management plan in order to address the revised criteria. 118

Support that financial assistance applicants should be the landowners (83.221). 4

Response: The final form regulation continues to include these financial assistance provisions.

173. Comment: The SCC should provide cost share funds for all soil and manure testing, regardless of the financial distress status of the operation. 7

Response: Agree. The final form regulation, consistent with the initial proposal, provides financial support to participating farmers in their use of soil and manure tests for planning purposes. The regulation establishes that only the soil and manure test kits will be funded, not the labor involved in taking the soil or manure samples.

174. Comment: Financial incentives should be provided to farmers for management practices that require an initial investment by farmers, but provide little economic benefit (cover crops, riparian buffers) as well as for innovative technologies to convert manure to other beneficial uses. 157, 159, 160, 161

Response: The final form regulation provides for a funding program to encourage the implementation of innovative manure processing technologies. The final form regulation also provides for a funding program to support an operator's efforts to implement cover crops on their operation. The Commission does not expect that the riparian buffer initiative addressed in Act 38 will necessarily require any significant investment by the farmer to implement.

175. Comment: Act 6 and other program's funds are not adequate to meet the current demands for BMPs for new conservation plans for all operations. 115, 120

Response: The Commission is attempting to provide adequate funding to support eligible CAOs in their efforts to develop and implement nutrient management plans. Erosion and sedimentation control efforts are a requirement of the DEP Chapter 102 program, not the Act 38 program administered by the Commission. Nutrient control BMPs listed in the approved nutrient management plan will continue to be eligible for funding under the Commission's existing financial assistance programs.

176. Comment: Any further regulations, and many of the present ones, have to have sufficient funding to cover their implementation without added costs to the farmer and without further paperwork. Let the farmer do his job of producing his product without further harassment. 138

If the SCC continues to make new regulations, then they should be prepared to finance all the costs that will be incurred by the farmer. 139

The Commission should consider that current funding levels may not be adequate to assist operators to comply with the proposed regulations. 125, 191

Response: Volunteer participants in the program currently use the vast majority of the plan implementation assistance funding budgeted to the Commission. Few CAOs have ever requested financial assistance to install BMPs required in the plan. As funding is increasingly focused on the CAO sector of the program, the Commission believes that current program expenditure levels will be sufficient to meet the needs of eligible CAOs.

The Commission is constantly evaluating the program to ensure that the requirements established in the regulations protect water quality, and are as practical as possible for the agricultural community to implement. To date, the Commission has been successful in obtaining financial support from the legislature to support the implementation of these requirements. The final form regulation provides for additional financial assistance programs to further assist the regulated community. These additional programs include a new plan maintenance program, a new innovative manure technologies program and a new cover crop program.

177. Comment: Tax-free grants should be made available to build manure holding structures. 122

Response: The final form regulation provides for a funding program to support the installation of all BMPs listed in an approved plan, including manure storage facilities.

178. Comment: Section 83.224(b)(4) is unnecessary; any operation receiving assistance will be required to develop a NMP. 198

Response: Section 83.224(b)(4) is provided to give funding priority to those volunteer operations that had an approved plan prior to the effective date of the regulations, over those newly planning volunteer operations. This will assist these existing volunteers in obtaining funding to install any additional BMPs that may be needed to update their existing plan to meet the criteria in the final form regulation.

179. Comment: Section 83.225(b) – A time frame for completeness and eligibility review should be required; suggest 15 days. 198

Response: The final form regulation requires that the operator be provided notice of the review of their application within 60 days of submission.

180. Comment: The Commission should fund community alternative manure treatment facilities or community manure distribution facilities. 129, 139, 140

The SCC should provide cost share funds for alternative technologies, regardless of the financial distress status of the operation. 7

Section 83.226(c) – Criteria should be provided, or a responsible party should be named, who will determine if alternative technologies are effective. 198

Response: The Commission agrees that the support of community based alternative manure processing or distribution facilities may be key to addressing manure imbalance issues in some parts of the state. The final form regulation therefore allows for this type of funding support.

The Commission is restricted under Act 38 in its ability to fund the installation of structural BMPs without having to assess the financial status of the operation. The Commission and its partnering agencies are considering how we may be able to work together to facilitate these efforts, while remaining compliant with this provision of the law.

The Commission in cooperation with its partner agencies, universities, and advisory boards, will be responsible for determining the effectiveness of alternative manure technologies proposed in financial assistance applications.

181. Comment: The SCC should provide cost share funds for amendments to update nutrient management plans, regardless of the financial distress status of the operation. 7

Revise the PDIP program to allow for an annual payment to participating farms to support the continued maintenance of the plan as well as record keeping. 195

Response: Agree. The final form regulation allows for a program to fund nutrient management plan amendment and update efforts, without regard to the financial distress status of the operation.

182. Comment: The SCC should provide cost share funds for cover crops, regardless of the financial distress status of the operation. 7

Response: Agree. The final form regulation allows for a program to fund cover cropping on participating operations, without regard to the financial distress status of the operation.

183. Comment: It should not be the producer's responsibility to fund soil tests and the development of nutrient balance sheets on importing operations 83.301. 125

Response: The operator of the animal production facility will work with the importing operator to determine who will be paying for the development of the nutrient balance sheet. The Act 38 regulation will not dictate who pays for the development of the nutrient balance sheet. The Commission's PDIP program will cost share the development of nutrient balance sheets included as part of a nutrient management plan submitted for approval.

184. Comment: The NM program should fund the transportation of manure from existing farms that are required to export manure to importing sites, but only for existing operations and not for new or proposed operations. 129, 139, 140

Response: The Commission does not consider manure transportation funding to be a long-term solution to nutrient imbalances within Pennsylvania. Neighboring states have implemented such a program, which has negatively impacted an effective, market based manure distribution system in this region of the country. The Commission is committed to identifying and supporting long-term manure management programs that have the likelihood to effectively address nutrient imbalances in Pennsylvania in a fiscally responsible manner.

185. Comment: Describe the funding presently available for funding plan development and implementation. Will all operations required to comply with the regulations qualify for funding? 196

Response: The Commission currently provides 75% cost share funding to existing operations for development of the initial nutrient management plan. Only those operations that were in operation as of the effective date of the regulations will be eligible for funding for plan development.

The Commission also provides 80% cost share funding for the installation of BMP listed in the approved nutrient management plan. This BMP implementation funding is only available to existing operations that meet the financial distress criteria established under Act 38.

Finally, the Commission, in cooperation with Treasury, provides a low interest loan program to fund implementation of BMPs listed in approved nutrient management plans.

The final form regulation establishes the following three additional financial assistance programs to support operators in their efforts to comply with the revised regulations:

- A plan maintenance program to cost share nutrient management plan updates.
- The final cost share assistance program will support farmers in their implementation of cover crops as called for in the revised regulations.
- A grants program to cost share the implementation of alternative manure treatment facilities either on an individual farm, or servicing a combination of operations.

Consistent with Act 38, only existing operators who can demonstrate financial distress will be eligible to receive grants funding for implementing alternative manure technology practices.

186. Comment: Nutrient Management Act implementation assistance funding should only be provided to those operations having greater than 15 AEUs. 195

Response: The Commission agrees that funding should be directed to operations having a larger impact on the environment. The Commission does however recognize that there are regulated operations smaller than 15 AEUs that will be compelled to meet these program requirements. The Commission believes it should provide funding to those operations that are required to follow these provisions; therefore, the Commission incorporated this comment into the final form regulation, with a slight revision. The final form regulation will prohibit funding to all operations having fewer than 8 AEUs, and will only provide funding to operations having between 8 AEUs and 15 AEUs if they are CAOs. Through this provision the Commission will support the regulated community to the full extent of its authority, but will restrict funding from going to small, non-regulated operations.

Commercial fertilizer and other nutrient sources

187. Comment: Support the language in the regulations to require that all nutrient sources applied to farmland be taken into consideration when preparing a nutrient management plan along with incorporation of nutrients. 194

Response: The final form regulation continues to require that all nutrient sources used on the operation be addressed in the nutrient management plan. Manure incorporation is not required under the regulation recognizing that no-till farming practices are important in reducing stormwater and nutrient runoff from agricultural fields. Also, it is not feasible to require manure incorporation on pasture or hay land. These sod fields serve as excellent manure application areas because the growing sod can readily uptake the nutrients applied to those lands.

188. Comment: Commercial fertilizer should follow the same setbacks as manure. 127, 129, 139, 162-187, 163, 169, 189

Response: The Commission believes that manure nutrients are more vulnerable to environmental losses, due to the inherent variability relating to nutrient content and application rates associated with manure. This variability is not as evident with chemical fertilizers.

189. Comment: Biosolids are not consistent and operators are not sure of the nutrient value or from what treatment plant they are receiving material from (83.291(a)). 115

Response: Where biosolids are used on a participating farm, a chemical analysis of the biosolids is required, consistent with that required of manure. This information will ensure biosolids applications achieve the same level of accuracy as manure applications.

190. Comment: Nutrient Management Act requirements don't go far enough in that the largest source of nitrogen and phosphorus in Pa is chemical fertilizers, farmers over apply chemical fertilizers. 117, 189

If producers are required to develop application rates for importing operations, than all fertilizers companies in Pa should be required as well. 125

Response: The Commission is only authorized under Act 38 to regulate nutrients associated with NMP Operations. Fertilizer and manure use on these operations, and fields that import their manure, is addressed under this regulation. Act 38 of 2005 does not give the Commission the authority to further regulate the agricultural community related to fertilizer use.

Stockpiling of manure

191. Comment: Support the in-field stacking provision in 83.404, as it strikes a reasonable balance between the need to minimize potential environmental risks with the need for flexibility in applying manure when conditions are most favorable. 10, 12

Response: The final form regulation builds on this provision, requiring additional protection, such as covering the stack with a tarp, if the in-field stack is to remain for longer than 120 days.

192. Comment: In-field stacking of manure should be limited to one month or less. [152, 157, 159, 160, 161] In-field stacking of manure should not be allowed if the manure is not covered within 2 weeks (83.294(b)). [3, 111, 134]

Timing restrictions on the in-field stacking of manure should be made by the producers and their advisors. [118] There is no requirement as to the length of time that manure can be temporarily stacked. [141]

The Commission should consider revising the proposed length of time for in-field stacking of manure to 15 days, to reduce the number of operations regulated as large CAFOs. 141

For in-field stacking, the term “by the next growing season” is too long and too vague. A specified number of days should be stipulated. 127, 198

“Prior to the next growing season” is too vague. The regulations should clearly specify for how long in-field stacking is permissible. (83.294(h)). 196

The NMAB recommends that the SCC identify Pa related scientific findings outlining the water quality impacts of in-field stacking of manure to provide proper direction on how this issue should be addressed in the Nutrient Management Act regulations. The NMAB is concerned that the Nutrient Management Act and CAFO programs may end up being inconsistent on this issue, and the confusion that could cause for the animal production industry in Pa. 195

Response: The Commission has assessed the available research related to this issue. Based upon those findings, which were generally inconclusive, the Commission has established a 120-day limitation on the in-field stacking provision. This limitation recognizes that not protecting these piles over the long term has proven in time to negatively affect water quality.

The Commission has also included a number of location and management criteria to ensure water resources are protected. These additional protections include: setbacks from water bodies, soil type limitations, soil slope limitations and pile shape and size limitations.

The Commission believes that these criteria will protect water quality in a manner that is practical for implementation by the agricultural community.

The Commission recognizes that the proper in-field stacking of manure will minimize the need for farmers to land apply the manure in the winter, when runoff of applied manure is most likely.

193. Comment: If manure is to be stockpiled in the fields, uncovered for more than 2 weeks, the plan should alert the operator that this practice may make the operator a CAFO. 3

Response: Agree. The Commission will address this issue through a revision to the standard plan approval letter developed by the program.

194. Comment: There is not a requirement that operators (specifically, large CAFOs) are required to divert, contain or treat runoff from temporary manure stacks. 141

Response: The manure stacking criteria established in the final form regulation, including requirements relating to duration of stacking, setbacks and other location considerations, soil types, soil slopes, pile configuration, pile size, etc., were developed to ensure the protection of nearby water resources. These criteria are based on those used successfully in other parts of the country.

195. Comment: In-field stacking of manure should have site conditions that must be met if being stacked for a prolonged period of time, such as: not in floodplains, not on steep slopes, out of drainageways and within stream setbacks. 197

Response: The Commission agrees and has established criteria in the final form regulation consistent with those expressed in this comment.

196. Comment: The regulations should cross-reference the criteria referred to as “criteria approved by the SCC”. (83.294(h)). 196

Response: The proposed language was deleted in the final regulation.

Site specific emergency response plans

197. Comment: The SCC or someone under their direction should develop a sample site-specific emergency response plan (83.312(a)). 115, 120
Guidance should be provided in the proposed regulations for the development of this plan, or a location where that guidance can be found. 198

Response: The Commission agrees and will be developing a sample emergency response plan, which will be incorporated into the Commission’s nutrient management program technical guidance.

198. Comment: Emergency response plans should be certified by the planner and submitted with the NMP. 198

Response: The emergency response plan is only useful to the operator or any local emergency response groups involved in an on-site incident relating to the accidental discharge of nutrients from a facility. The Commission and conservation district are not involved in carrying out these emergency provisions. Therefore, the submission of the emergency response plan is not necessary to the Commission meeting its statutory obligations under Act 38.

199. Comment: The regulations should require that the emergency response plan be provided to the local emergency management agency. (83.312(d)); (83.422(d)). 196

Response: The Commission agrees with this comment and the final form regulation does incorporate this requirement.

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133.	John F. Kendig 114 Moravian Avenue Lititz, PA 17543			
134.	Phil Coleman Sierra Club, Pennsylvania Chapter Box 606 Harrisburg, PA 17108			
135.	Karen Eble 58 Lee Lynn Lane Huntingdon Valley, PA 19006			
136.	Michael Platt 125 Platt Ln. New Columbia, PA 17856			
137.	Franklin L. Long Blair County Conservation District 1407 Blair St. Hollidaysburg, PA 16648			

138.	Ed Kosa 900 Pushersiding Road Ulysses, PA 16948			
139.	Ray Espenshade 1128 Hill School Rd. Lewisburg, PA 17837-7556			
140.	James Brubaker 1530 Buffalo Road Lewisburg, PA 17837			
141.	Hank Zygmunt EPA, Region III 1650 Arch St. Philadelphia, PA 19103-2029			
142.	Jeffrey Odefey Waterkeeper Alliance 828 S. Broadway, Suite 100 Tarrytown, NY 10591			
143.	John J. Miravich Stevens & Lee 111 North 6 th St. P.O. Box 679 Reading, PA 19603-0679			
144.	John R. Thompson 1759 Fort Washington Ave. Maple Glen, PA 19002			
145.	Rita Wise-Favinger 903 W. Aaron Dr., Apt O State College, PA 16803			
146.	Frank Thomas 291 Red Bridge Rd. Gettysburg, PA 17325			
147.	John R. Hess JoBo Holstein Farm LLC 200 Tall Oaks Rd. Gettysburg, PA 17325			
148.	Bob Mikesell, PhD 324 Henning Building University Park, PA 16802			
149.	Sue Smith 568 Buchert Rd. Gilbertsville, PA 19525			
150.	Stephen B. Graham, D.O. J.C. Blair Memorial Hospital Medical Office Blding – Second Floor Huntingdon, PA 16652			

151.	Kar-Dale-Acres 243 Healy Road Shinglehouse, PA 16748			
152.	Munch, Ph.D. Albright College P.O. Box 15234 Reading, PA 19602			
153.	Atlee D. Miller 464 Collins Hill Rd. Ulysses PA 16948			
154.	Ed Kosa, Potter County Conservation District, 107 Market St., Coudersport, PA 16915			
155.	Allen and Amy Weikert Weikert's Egg Farm 2559 Fairfield Rd. Gettysburg, PA 17325			
156.	Robert Ruth Country View Family Farms, Inc. 120 Lake St., P.O. Box 526 Ephrata, PA 17522			
157.	Kelly O'Neill Chesapeake Bay Foundation The Old Water Works Building 614 North Front Street, Suite G Harrisburg, PA 17101	X		
158.	Elam M. Herr Holly Fishel PA State Assoc. Township Supervisors 4855 Woodland Drive Enola, PA 17025			
159.	Mrs. Seri Kern 2402 Rock Hill Church Rd. Everett, PA 15537-3505	X		
160.	Barb Lavin 1066 Freedom Ct. Quakertown, PA 18951-2791	X		
161.	Peter Wilmerding 260 Booth Ln Haverford, PA 19041-1717	X		
162.	Robert Kucharski 9351 Rt. 414 Liberty, PA 16930			

163.	Gary Messner RR #1, PO Box 50 Roaring Branch, PA 17765			
164.	William Pierce Box 252, RR 2 Columbia Crossroads, PA 16914			
165.	David Sweigart 189 Ridgeview Rd S. Elizabethtown, PA 17022			
166.	Don Buffington 375 Feidt Rd. Millersburg, PA 17601			
167.	Tom Wray 5425 Old Stage Rd. McClure, PA 17841			
168.	Mike Brendle 13A Brendle Lane Lebanon, PA 17046			
169.	Delbert Swartz RR #1, Box 38A Thomsontown, PA 17094			
170.	Jay Hess 2615 Main St. Conestoga, PA 17516			
171.	Darrell Henry 5177 Hill Climb Rd. Spring Grove, PA 17362			
172.	Bruce Grove 12706 High Point Rd. Felton, PA 17322			
173.	John Keating 1620 Beans Cove Rd. Clearville, PA 15535			
174.	Willard Hackman RT 7 Box 49B Wellsboro, PA 16901			
175.	J. Nelson Sangrey 1858 Ridge Rd. Tyrone, PA 16686			
176.	Todd Hiller 84 Hiller Lane Allenwood, PA 17810			
177.	John Pfleegor 460 Gold Road Muncy, PA 17756			

178.	Jeremiah & James Sensenig 114 Widison Rd. Quarryville, PA 17566			
179.	Ron Coleman HCR1 Box 155 Huntingdon, PA 16652			
180.	Henry Brothers 5177 Hill Climb Rd. Spring Grove, PA 17362			
181.	Kenton Sweigart 620 Greider Rd. Mount Joy, PA 17552			
182.	Patrick Blow RR 2 Box 251 Towanda, PA 18848			
183.	Gerald Zimmerman 50 Pine Grove Rd Nottingham, PA 19362			
184.	Tom Zartman 820 Hilltop Rd Ephrata, PA 17522			
185.	Raymond Harnish 491 Barnsley Rd. Oxford, PA 19363			
186.	Robert Shearer 806 Anderson Ferry Rd Mt. Joy, PA 17552			
187.	Matthew and Sharon McClellan RR 1 Box 181 Granville Summit, PA 16926			
188.	Darryl L. Lovell			
189.	LaMar Troup RR 1 Box 151 Beaver Springs, PA 17812			
190.	DEP Agriculture Advisory Board Rachael Carson State Office Building Harrisburg, PA			
191.	Pa Senate and House Ag and Rural Affairs Committees Harrisburg, PA			
192.	Adams County Conservation District 670 Old Harrisburg Road Suite 201 Gettysburg, PA 17325			

193.	M. G. Jones 4379 Ressler Road Glen Rock, PA 17327-9445			
194.	Pa State Association of Township Supervisors 4855 Woodland Drive Enola, PA 17025			
195.	Pa Nutrient Management Advisory Board 2301 North Cameron Street Suite 407 Harrisburg, PA 17110			
196.	Independent Regulatory Review Commission 333 Market Street, 14 th floor Harrisburg, PA 17101			
197.	Bradford County Conservation District Stoll Natural Resource Center RR 5, Box 5030-C Towanda, PA 18848			
198.	Dauphin County Conservation District 1451 Peters Mountain Road Dauphin, PA 17018			
199.	Dinda Evans			

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE 1. LAND RESOURCES

CHAPTER 83. STATE CONSERVATION COMMISSION

Subchapter D. NUTRIENT MANAGEMENT

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GENERAL PROVISIONS

§ 83.201. Definitions.

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise:

AEU—Animal equivalent unit—One thousand pounds live weight of livestock or poultry animals, **ON AN ANNUALIZED BASIS**, regardless of the actual number of individual animals comprising the unit.

AEU per acre—An animal equivalent unit per acre of cropland or acre of land suitable for application of animal manure.

Act— ~~{The Nutrient Management Act (3 P. S. §§ 1701—1718)}~~ **THE ACT OF JULY 6, 2005 (Act 38 of 2005)(3 PA. C.S. §§ 501 - 522).**

ACT 49—THE ACT OF JUNE 28, 2004 (P.L. 454, NO.49)(3 P.S. §§2010.1 – 2010.12).

KNOWN AS THE COMMERCIAL MANURE HAULER AND BROKER

CERTIFICATION ACT.

Agent—An entity delegated Commission powers and duties under the authority of section 4(3) of the Conservation District Law (3 P. S. § 852(3)), including a partnership, association, corporation, municipality, municipal authority, political subdivision of this Commonwealth and an agency, department, commission or authority of the Commonwealth.

AGRICULTURAL EROSION AND SEDIMENT CONTROL PLAN—A SITE-SPECIFIC PLAN IDENTIFYING BMPS TO MINIMIZE ACCELERATED EROSION AND SEDIMENTATION FROM AGRICULTURAL RUNOFF, REQUIRED BY CHAPTER

**102. THE AGRICULTURAL EROSION AND SEDIMENT CONTROL COMPONENTS
OF A CONSERVATION PLAN MAY MEET THIS REQUIREMENT, IF ALLOWED
UNDER CHAPTER 102.**

Agricultural operations—The management and use of farming resources for the production of crops, livestock or poultry.

Animal concentration areas—Barnyards, feedlots, loafing areas, exercise lots, or other similar animal confinement areas that will not maintain a growing crop, or where deposited manure nitrogen is in excess of crop needs. The term excludes areas managed as pastures or other cropland. The term excludes pasture access ways, if they do not cause direct flow of nutrients to surface water or groundwater.

**ANIMAL UNIT—ONE THOUSAND POUNDS LIVE WEIGHT OF LIVESTOCK OR
POULTRY ANIMALS, REGARDLESS OF THE ACTUAL NUMBER OF INDIVIDUAL
ANIMALS COMPRISING THE UNIT.**

BMP—Best management practice—A practice or combination of practices determined by the Commission to be effective and practicable (given technological, economic and institutional considerations) to manage nutrients to protect surface water and groundwater taking into account applicable nutrient requirements for crop utilization. [The term includes, but is not limited to:

- (i) Conservation tillage.
- (ii) Crop rotation.
- (iii) Soil testing.
- (iv) Manure testing.
- (v) Diversions.

- (vi) **Manure storage facilities.**
- (vii) **Stormwater management practices.**
- (viii) **Nutrient application.]**

BROKER—A PERSON THAT IS NOT WORKING FOR OR UNDER THE CONTROL OF AN AGRICULTURAL OPERATION AND THAT ASSUMES TEMPORARY CONTROL OR OWNERSHIP OF MANURE FROM AN NMP OPERATION AND ARRANGES FOR TRANSPORT TO AND UTILIZATION AT AN IMPORTING OPERATION OR OTHER LOCATION.

BUFFER—VEGETATED BUFFER—

(I) A PERMANENT STRIP OF DENSE PERENNIAL VEGETATION ESTABLISHED PARALLEL TO THE CONTOURS OF, AND PERPENDICULAR TO, THE DOMINANT SLOPE OF THE FIELD.

(II) THERE IS NO MECHANICAL APPLICATION OF MANURE WITHIN THE BUFFER AREA.

(III) THE PURPOSES INCLUDE SLOWING WATER RUNOFF, ENHANCING WATER INFILTRATION, AND MINIMIZING THE RISK OF ANY POTENTIAL NUTRIENTS FROM LEAVING THE FIELD AND REACHING SURFACE WATERS.

*CAO—Concentrated animal operation—Agricultural operations **with eight or more animal equivalent units** where the animal density exceeds two AEUs per acre on an annualized basis.*

Commission—The State Conservation Commission established by the Conservation District Law (3 P. S. §§ 849—864).

**COMMERCIAL MANURE HAULER—A PERSON THAT TRANSPORTS OR LAND-
APPLIES MANURE AS A CONTRACT AGENT FOR AN NMP OPERATION OR A
BROKER UNDER THE DIRECTION OF THE OPERATION OR BROKER.**

Concentrated water flow areas—[Those natural] Natural or manmade areas where stormwater runoff is channeled and conveyed directly to [a] surface water [body] or groundwater. The term includes, but is not limited to, ditches, waterways, gullies and swales.

Conservation district—A county conservation district established under the Conservation District Law.

~~**Conservation Plan—A plan that identifies conservation practices and includes site-specific BMPs which minimize the potential for accelerated erosion and sediment from agricultural plowing or tilling activities, and which contains:**~~

~~**(i) BMPs for agricultural plowing and tilling activities, including soil loss tolerance values (T), identified in the Pennsylvania Technical Guide.**~~

~~**(ii) A schedule for the implementation of the BMPs.**~~

Cooperative Extension—The Penn State Cooperative Extension.

Critical runoff problem areas—[Those nonvegetated] Nonvegetated concentrated water flow areas directly discharging into surface water [bodies] or groundwater, and [those] areas where runoff containing nutrients that were applied after the growing season discharge directly into surface water or groundwater. The term includes gullies and unprotected ditches.

Crop [group] management unit—[A crop field or group of crop fields that are planted to the same crop, managed as a unit, have similar levels of residual nutrients and will produce similar crop yields.] The portion of cropland, hayland and pasture, including a field, a

portion of a field, or group of fields, on an agricultural operation that has a unique management history (same rotation and manure history), similar production capability, and that will be managed uniformly as a distinct unit.

~~[Department—The Pennsylvania Department of Environmental Protection.]~~

~~EMERGENCY MANURE STACKING AREAS—UNIMPROVED AREAS THAT ARE AUTHORIZED TO BE USED FOR THE STORAGE OF SOLID MANURE TO BE APPLIED TO THE LAND AS PLANT NUTRIENTS, EXCEPT THAT THESE AREAS ARE ONLY USED AS A CONTINGENCY MEASURE TO ADDRESS SITUATIONS WHERE THE APPROVED MANURE HANDLING PRACTICE AS DESCRIBED IN THE PLAN IS NOT ABLE TO ADDRESS THE MANURE GENERATED ON THE OPERATION DUE TO UNFORSEEN CIRCUMSTANCES.~~

~~[Erosion and Sediment Control Plan—A site-specific plan identifying BMPs to minimize accelerated erosion and sedimentation. An Erosion and Sediment Control Plan under 25, Pa. Code, Chapter 102, required for plowing and tilling activities, may be that portion of a Conservation Plan identifying BMPs to minimize erosion and sedimentation.]~~

~~[Existing agricultural operation—For the sole purpose of determining the eligibility for the Nutrient Management Plan Implementation Grants Program established under the act, an existing operation is an agricultural operation producing crops, livestock or poultry as of [effective date of the of the regulations], where the focus of the operation has not changed since [effective date of the of the regulations]. A change in focus includes a significant increase in the scope or magnitude of the operation as well as the inclusion of a new livestock type on the operation.]~~

Farming resources—The animals, facilities and lands used for the production **OR RAISING** of crops, livestock or poultry. The lands are limited to those located at the animal **{production}** facility which are owned ~~[, rented or leased]~~ by the operator **of the facility**, and **other owned, rented or leased** lands **[under agreement or]** under the management control of the operator **of the facility** that are **[an integral part of the production of crops, livestock or poultry and the associated management]** **used for the application, treatment or storage of {nutrients}** **MANURE** generated **[by the animal production]** **at the facility**.

Fund—The Nutrient Management Fund established under section ~~{10}~~ **512** of the act **(3 PA. C.S.A. § 512)**.

In-field stacking—**The practice of stacking solid manure on unimproved cropland, HAYLAND AND PASTURE areas to be applied to the land as plant nutrients.**

INTERMITTENT STREAM—A BODY OF WATER FLOWING IN A CHANNEL OR BED COMPOSED PRIMARILLY OF SUBSTRATES ASSOCIATED WITH FLOWING WATER WHICH, DURING PERIODS OF THE YEAR, IS BELOW THE WATER TABLE AND OBTAINS ITS FLOW FROM BOTH SURFACE RUNOFF AND GROUNDWATER DISCHARGES.

Livestock—**Animals raised, stabled, fed or maintained on an agricultural operation with the purpose of generating income or providing work, recreation or transportation. Examples include: dairy cows, beef cattle, goats, sheep, swine, and horses. The term does not include aquatic species.**

MANURE—ANIMAL EXCREMENT, INCLUDING POULTRY LITTER, WHICH IS PRODUCED AT AN AGRICULTURAL OPERATION. THE TERM INCLUDES

MATERIALS SUCH AS BEDDING, WASHWATER AND OTHER MATERIALS WHICH ARE COMINGLED WITH THAT EXCREMENT.

Manure Management Manual—The guidance manual **published by the Department OF ENVIRONMENTAL PROTECTION that is** entitled “Manure Management Manual for Environmental Protection,” **[and] including** its supplements **[developed by an interagency workgroup and published by the Department] and amendments**. The manual describes approved manure management practices for **[which a permit or approval from the Department is not required as set forth in § 101.8] all agricultural operations as required by § 91.36** (relating to pollution control and prevention **[from] at** agricultural operations).

Manure group – A portion of the manure generated on the operation that is distinct due to factors including species, handling practices, ~~storage location,~~ manure consistency, anticipated nutrient content, or application season.

Manure storage facility—

(i) A permanent structure or facility, or portion of a structure or facility, utilized for the primary purpose of containing manure. **[The storage facility of a waste management system is the tool that gives the manager control over the scheduling and timing of the spreading or export of manure.]**

(ii) Examples include: liquid manure structures, manure storage ponds, component reception pits and transfer pipes, containment structures built under a confinement building, permanent stacking and composting facilities and manure treatment facilities.

(iii) The term does not include the animal confinement areas of poultry houses, horse stalls, freestall barns or bedded pack animal housing systems.

~~[Mechanical incorporation of manure]~~ **MECHANICALLY INCORPORATED**—The

combination of manure with the soil by means of farm tillage or manure injection equipment, including disks and twisted shank chisel plows, in order to minimize the potential of overland runoff of the manure.

NATIONAL WETLANDS INVENTORY—THE INVENTORY OF KNOWN WETLANDS

PREPARED BY THE U.S. FISH AND WILDLIFE SERVICE AND READILY

AVAILABLE ON MAPS IN DIGITAL FORMAT ON THE INTERNET.

NRCS—Natural Resources Conservation Service—The Natural Resources Conservation Service of the United States Department of Agriculture, formerly known as the Soil Conservation Service.

Nutrient—A substance or recognized plant nutrient, element or compound which is used or sold for its plant nutritive content or its claimed nutritive value. The term includes, but is not limited to, livestock and poultry manures, compost as fertilizer, commercially manufactured chemical fertilizers, ~~[sewage sludge]~~ **biosolids** or combinations thereof. **THE ONLY NUTRIENT ELEMENTS OF CONCERN UNDER THIS SUBCHAPTER, BASED ON THEIR POTENTIAL TO IMPACT THE QUALITY OF SURFACE WATERS OR GROUNDWATER, ARE NITROGEN AND PHOSPHORUS. UNLESS THE CONTEXT CLEARLY INDICATES OTHERWISE, “NUTRIENTS” AS USED IN THIS SUBCHAPTER SHALL MEAN NITROGEN AND PHOSPHORUS.**

Nutrient balance sheet – A crop management ~~{too}~~ **BMP developed to protect {and maintain water}** **SURFACE AND GROUNDWATER quality by providing the calculations for determining the {amount of} APPROPRIATE RATE, METHOD AND TIMING OF**

manure that can be applied to cropland, hayland and pasture, to meet the ~~nitrogen needs~~
~~of a given crop management unit, using procedures acceptable to the Commission]~~

PURPOSES OF THIS SUBCHAPTER. ~~The nutrient balance sheet takes into account the
type and yield of crop to be grown, the residual nitrogen from various nutrient sources and
any planned chemical fertilizer applications.]~~

~~NUTRIENT MANAGEMENT PLAN OPERATION—NMP OPERATION—CAOS, VAOS
AND OPERATIONS REQUIRED TO DEVELOP COMPLIANCE PLANS PURSUANT
TO § 506(J) OF THE ACT.~~

Nutrient management specialist or specialist— A person satisfying the requirements of the Department of Agriculture's Nutrient Management Certification Program in 7 Pa. Code §§ 130b.1—130b.51 (relating to nutrient management certification).

Pastures—Crop areas managed for forage production that are harvested by livestock, or A COMBINATION OF livestock and ~~haying, and where animal management practices~~ ~~[assure] [ensure that] [uncollected] [manure nutrients [are limited to] deposited by~~ ~~livestock does not exceed] [the amounts utilized by the crop]~~ MECHANICAL HARVESTING.

Pennsylvania Agronomy Guide—The ~~[quick]~~ reference book published by ~~[the]~~ Cooperative Extension and updated periodically, used as a practical guide to grain and forage production, soil fertility management, pest management and erosion control, with special reference to Pennsylvania conditions.

~~*Pennsylvania Soil and Water Conservation Technical Guide*~~—*Pennsylvania Technical Guide*—A primary reference document published by the United States Department of

Agriculture's NRCS, ENTITLED THE PENNSYLVANIA SOIL AND WATER

CONSERVATION TECHNICAL GUIDE, which is used by technically trained persons to plan and apply appropriate BMPs.

Perennial stream—A body of water [that normally flows year-round] **flowing** in a [defined] channel or bed [,] **composed primarily of substrates associated with flowing waters** and [is] capable, in the absence of pollution or other manmade stream disturbances, of supporting bottom dwelling aquatic animals.

Permanent manure stacking areas—Designated, improved storage areas that are used for the long term or recurring storage of solid manure.

Phosphorus Index —

(I) The field evaluation ~~{too}~~ METHODOLOGY developed specifically for Pennsylvania and approved by the Commission, which combines indicators of phosphorus sources and phosphorus transport, to identify areas that have a high vulnerability or risk of phosphorus loss to surface waters ~~{, and}~~

(II) THIS EVALUATION METHODOLOGY provides direction on BMPS TO ADDRESS the land application of phosphorus-containing nutrient sources, to protect water quality.

Plan—nutrient management plan—

(i) A written site-specific plan which [incorporates BMPs to manage the use of plant nutrients for crop production and water quality protection consistent with the criteria] meets the requirements in ~~{sections 4 and 6 of the act (3 P. S. §§ 1704 and 1706), and in §§~~

~~83.271, 83.272 and 83.281—83.331 for CAOs] [or] [and §§ 83.271, 83.272 and 83.391—
83.441 for] [nonCAOs planning under the act] [VAOs.~~

~~(ii) The term includes plan amendments required under §§ 83.371, 83.372, 83.481 and
83.482] THE ACT, AND IN §§ 83.271, 83.272 AND 83.281 – 83.381. EXCEPT WHERE
OTHERWISE STATED, THE TERM INCLUDES PLAN AMENDMENTS REQUIRED
UNDER THIS SUBCHAPTER.~~

~~SOIL TEST LEVEL—THE LEVEL OF SOIL CHARACTERISTICS SUCH AS
PHOSPHORUS, POTASSIUM AND PH, ANALYZED USING STANDARD INDUSTRY
METHODS SUCH AS THOSE DESCRIBED IN THE CURRENT PENNSYLVANIA
AGRONOMY GUIDE.~~

~~Spring—A place where groundwater flows naturally from rock or soil onto the land surface [or
into a surface water body,] for a total of 183 days or more per year.~~

~~Stormwater—Runoff from the surface of the land resulting from rain, [or] snow or ice melt.~~

~~[Surface water] [and groundwater]—[All rivers, streams, creeks, rivulets, impoundments,
ditches, water courses, storm sewers, lakes, dammed water, ponds, springs and all other
bodies or channels of conveyance of surface and underground water, or parts thereof,
whether natural or artificial, within or on the boundaries of this Commonwealth.]~~

~~Perennial and intermittent streams, rivers, lakes, reservoirs, ponds, wetlands, springs,
natural seeps and estuaries, excluding water at facilities approved for wastewater
treatment such as wastewater treatment impoundments, cooling water ponds and
constructed wetlands used as part of a wastewater treatment process.]~~

~~{Temporary manure stacking areas—Unimproved areas}[, preferably located in crop fields,] that are [planned] {authorized to be used} [in unforeseen circumstances] ~~{for the storage of solid manure to be} [used] {applied to the land as plant nutrients during the next growing season, or for other acceptable uses, except that these areas are only used as a contingency measure to address situations where the approved manure handling practice as described in the plan is not able to address the generated manure due to unforeseen circumstances.}~~~~

VAO— Voluntary agricultural operation –

(i) Any operation ~~{not specifically required under the act or these regulations to submit and implement a nutrient management plan meeting the criteria established in this Subchapter.}~~ THAT VOLUNTARILY AGREES TO MEET THE REQUIREMENTS OF THIS SUBCHAPTER EVEN THOUGH IT IS NOT OTHERWISE REQUIRED UNDER THE ACT OR THESE REGULATIONS TO SUBMIT A NUTRIENT MANAGEMENT PLAN.

(ii) The term includes agricultural operations applying for financial assistance under the act.

WINTER—DECEMBER 15 TO FEBRUARY 28, OR ANY TIME THE GROUND IS FROZEN AT LEAST FOUR INCHES DEEP OR IS SNOW COVERED.

§ 83.202. Scope.

This subchapter specifies ~~{minimum}~~ criteria and requirements for:

(1) Nutrient management plans required under the act for CAOs, VAOS ~~{or other agricultural operations directed by the Commission or the Department to follow the CAO criteria established under the act}~~ **AND OPERATIONS REQUIRED TO DEVELOP**

COMPLIANCE PLANS PURSUANT TO § 506(J) OF THE ACT.

(2) [Voluntary nutrient management plans developed on other agricultural operations and submitted to the Commission or delegated conservation district for approval under the act] ~~[Nutrient management plans submitted by VAOs.]~~

(3) Plans on other agricultural operations receiving financial assistance under the act or under the Chesapeake Bay Nonpoint Source Pollution Abatement Program.

(4) Compliance plans submitted by an agricultural operation found to be in violation of The Clean Streams Law (35 P. S. §§ 691.1—691.1001).

(5) The construction, location, [storage capacity] design, installation and operation of animal manure storage facilities [constructed and existing facilities expanded or repaired as part of a plan developed under the act] ~~{on agricultural operations subject to the act}~~ **ON NMP OPERATIONS.**

[(6)] ~~{(4)}~~ (3) * * *

[(7)] ~~{(5)}~~ (4) * * *

[(8)] ~~{(6)}~~ (5) * * *

§ 83.203. Purpose.

The purposes of this subchapter are to:

(1) Assure the proper utilization and management of nutrients on CAOs, VAOS AND OPERATIONS REQUIRED TO DEVELOP COMPLIANCE PLANS PURSUANT TO § 506(J) OF THE ACT.

(2) ~~Encourage the proper utilization and management of nutrients on agricultural operations.~~ ASSURE THE PROPER UTILIZATION AND MANAGEMENT OF NUTRIENTS WHEN MANURE IS EXPORTED OFF OF THE OPERATIONS DESCRIBED IN (1).

(3) Protect the quality of surface water and groundwater.

§ 83.204. ~~Applicability of requirements~~ RESERVED.

~~(a) CAOs required under the act, or other operations directed by the Commission or the Department to submit and implement a [plan] [under the act] [shall] [refer to] [comply with the following sections] [for applicable requirements] [:- §§ 83.261 and 83.271—83.381.~~

~~(b) [Agricultural operations that plan voluntarily under the act or as a condition of receiving financial assistance under the act or the Chesapeake Bay Non-point Source Pollution Abatement Program,] [VAOs shall] [refer to] [comply with the following sections] [for applicable requirements] [:- §§ 83.261, 83.271, 83.272 and 83.391—83.491.]~~

§ 83.205. Preemption of local ordinances.

- (a) The act and this subchapter are of Statewide concern and occupy the whole field of regulation regarding nutrient management to the exclusion of all local regulations.
- (b) After October 1, 1997, no ordinance or regulation of any political subdivision or home rule municipality may prohibit or in any way regulate practices related to the storage, handling or land application of animal manure or nutrients or to the construction, location or operation of facilities used for storage of animal manure or nutrients or practices otherwise regulated by the act or this subchapter if the municipal ordinance is in conflict with **[the requirements of]** the act and this subchapter.
- (c) Nothing in the act or this subchapter prevents a political subdivision or home rule municipality from adopting and enforcing ordinances or regulations which are consistent **with** and no more stringent than the requirements of the act and this subchapter.
- (d) No penalty will be assessed under any valid local ordinance or regulation for any violation for which a penalty has been assessed under the act or this subchapter.

§ 83.206. Limitation of liability.

If an operator is fully and properly implementing a plan approved by a delegated county conservation district or the Commission and maintained under the act and this subchapter, the implementation shall be given appropriate consideration as a mitigating factor in any civil action for penalties or damages alleged to have been caused by the management or utilization of nutrients **under** the implementation.

§ 83.207. Compliance assistance and enforcement.

(a) The Department of Agriculture will assist the Commission in developing programs to assist those engaged in production agriculture to comply with the act and this subchapter.

(b) The Department of Agriculture will act as an ombudsman to help resolve issues related to county conservation district implementation of the act and this subchapter for those conservation districts delegated nutrient management program responsibilities under § 83.241 (relating to delegation to local agencies).

(c) The Commission will be responsible for taking enforcement actions under the act and this subchapter. In the exercise of its enforcement authority, the Commission will be assisted by the staff of the Department for actions resulting in violations of The Clean Streams Law (35 P. S. §§ 691.1—691.1001) and will be assisted by the Department of Agriculture for all other violations.

PLAN DEVELOPMENT AND PLAN MAINTENANCE INCENTIVES PROGRAMS

§ 83.211. Applicant eligibility.

(a) IN ORDER TO BE ELIGIBLE TO APPLY FOR FINANCIAL ASSISTANCE FOR NUTRIENT MANAGEMENT PLAN DEVELOPMENT OR PLAN MAINTENANCE, A PERSON SHALL MEET THE FOLLOWING CRITERIA.

(1) In addition to seeking financial assistance for the implementation of a NUTRIENT MANAGEMENT plan under §§ 83.221—83.233 (relating to financial assistance), ~~the operator of a CAO or other agricultural operation planning~~ A NMP OPERATION SEEKING TO SUBMIT A NUTRIENT MANAGEMENT PLAN FOR THE FIRST TIME

under the act, may apply for funding under the Plan Development Incentives Program for the development of a NUTRIENT MANAGEMENT plan BY A CERTIFIED PLAN WRITER.

(2) IN ADDITION TO SEEKING FINANCIAL ASSISTANCE FOR THE IMPLEMENTATION OF A NUTRIENT MANAGEMENT PLAN UNDER §§ 83.221-83.233 (RELATING TO FINANCIAL ASSISTANCE), A NMP OPERATION SEEKING TO AMEND AN EXISTING NUTRIENT MANAGEMENT PLAN APPROVED PRIOR TO OCTOBER 1, 2006, MAY APPLY FOR FUNDING UNDER THE PLAN DEVELOPMENT INCENTIVES PROGRAM FOR THE DEVELOPMENT OF THE AMENDMENT TO THE EXISTING APPROVED PLAN BY A CERTIFIED NUTRIENT MANAGEMENT PLAN WRITER.

(3) IN ADDITION TO SEEKING FINANCIAL ASSISTANCE FOR THE IMPLEMENTATION OF A NUTRIENT MANAGEMENT PLAN UNDER §§ 83.221—83.233 (RELATING TO FINANCIAL ASSISTANCE), A NMP OPERATION SEEKING TO UPDATE OR AMEND AN APPROVED NUTRIENT MANAGEMENT PLAN MEETING THE REQUIREMENTS OF THIS REVISED SUBCHAPTER, MAY APPLY FOR FUNDING UNDER THE PLAN MAINTENANCE INCENTIVES PROGRAM FOR THE DEVELOPMENT OF A NUTRIENT MANAGEMENT PLAN UPDATE OR AMENDMENT BY A CERTIFIED NUTRIENT MANAGEMENT PLAN WRITER.

(b) [Only agricultural] Agricultural operations ~~{that were producing crops, livestock or poultry}~~ EXISTING as of [October 1, 1997] OCTOBER 1, 2006, and are or will be producing or utilizing livestock or poultry manure or both on their operation, are eligible to receive funding under this ~~{program}~~ SUBCHAPTER.

(c) [For the time period of October 1, 1997, to September 30, 1998, only CAOs are eligible to receive funding under this program.] ~~{CAOs}~~ NMP OPERATIONS that are in violation OF THE NUTRIENT MANAGEMENT [as determined by the Commission, of the] plan submission requirements, or any other requirements OF AN EXISTING NUTRIENT MANAGEMENT PLAN, the act, OR THE NUTRIENT MANAGEMENT REGULATIONS, SHALL [are] not BE eligible for funding under {this program} the Plan Development Incentives Program or the Plan Maintenance Incentives Program.

(d) {Agricultural operations} NMP OPERATIONS having an approved plan prior to OCTOBER 1, 2006 that are in compliance with that plan and the act are eligible to receive funding UNDER THE PLAN DEVELOPMENT INCENTIVES PROGRAM to amend the plan in order to meet the requirements of this revised Subchapter.

(E) ONLY THOSE AGRICULTURAL OPERATIONS HAVING AN APPROVED NUTRIENT MANAGEMENT PLAN MEETING THE REQUIREMENTS OF THIS REVISED SUBCHAPTER SHALL BE ELIGIBLE TO RECEIVE FUNDING UNDER THE PLAN MAINTENANCE INCENTIVES PROGRAM.

§ 83.212. Application procedure.

(a) An application for funding from the Plan Development Incentives Program OR PLAN MAINTENANCE INCENTIVES PROGRAM shall be made on forms developed by the Commission and shall be addressed to the Commission or delegated conservation district.

(b) An application received by the Commission or delegated conservation district will be reviewed for completeness, eligibility and the appropriate level of funding.

(c) If the application is determined to be incomplete, the Commission, or delegated conservation district, will provide the applicant with a written explanation of the reason for the determination, and request the additional information needed to complete the application process.

(d) The Commission or delegated conservation district will approve or disapprove each application submitted. Within 45 days of receipt of the required information, applicants will be notified in writing of actions taken on their applications and their rights to appeal the actions.

(e) If the approval of applications for funding from the Plan Development Incentives Program **OR PLAN MAINTENANCE INCENTIVES PROGRAM** is delegated to a county conservation district under § 83.241 (relating to delegation to local agencies), actions of conservation districts shall be deemed actions of the Commission unless an applicant aggrieved by an action of a conservation district seeks Commission review of the action within 30 days from actual or constructive notice of the action.

(f) The applicant may appeal a decision of the Commission to the EHB as provided for in section 15 of the act (3 P. S. § 1715).

§ 83.213. Application prioritization criteria.

[(a) Only CAOs are eligible for funding from this program for the time period of October 1, 1997, to September 30, 1998.

(b) After September 30, 1998, the] (A) The distribution of funding UNDER THE PLAN DEVELOPMENT INCENTIVES PROGRAM shall be provided to the extent funds are available based on the following prioritization:

(1) Agricultural operations newly classified as CAOs due to the revised criteria established in this amended subchapter.

(2) CAOs amending a plan approved prior to OCTOBER 1, 2006, in order to conform with the revised program criteria.

(3) CAOs coming into existence after [October 1, 1997] OCTOBER 1, 2006, due to loss of rented acres.

[(2) [Non-CAOs volunteering to comply with the act] (4) VAOs amending a plan approved prior to OCTOBER 1, 2006, to conform with the revised program criteria.

[(3)[Non-CAOs in existence before October 1, 1997] (5) VAOs submitting a plan under the act.

[(4)] (6) Other CAOs coming into existence after [October 1, 1997] OCTOBER 1, 2006.

(B) THE DISTRIBUTION OF FUNDING UNDER THE PLAN MAINTENANCE INCENTIVES PROGRAM SHALL BE PROVIDED TO THE EXTENT FUNDS ARE AVAILABLE BASED ON THE FOLLOWING PRIORITIZATION:

- (1) CAOS DEVELOPING PLAN UPDATES OR AMENDMENTS.**
- (2) VAOS DEVELOPING PLAN UPDATES OR AMENDMENTS.**
- (3) OTHER NMP OPERATIONS DEVELOPING PLAN UPDATES OR AMENDMENTS.**

§ 83.214. Eligible costs.

(a) Eligible costs considered by the Commission UNDER THE PLAN DEVELOPMENT INCENTIVES PROGRAM are those fees incurred for the development of the initial NUTRIENT MANAGEMENT plan or the amendment of a NUTRIENT MANAGEMENT plan approved prior to OCTOBER 1, 2006, to conform with the revised program criteria.

(b) ELIGIBLE COSTS CONSIDERED BY THE COMMISSION UNDER THE PLAN MAINTENANCE INCENTIVES PROGRAM ARE THOSE FEES INCURRED FOR THE DEVELOPMENT OF AN UPDATE OR AMENDMENT TO A NUTRIENT MANAGEMENT PLAN MEETING THE REQUIREMENTS OF THIS REVISED SUBCHAPTER.

(C) [Only those] Costs of soil and manure tests [costs included in the service fee charged] (not including labor costs) for initial plan development, or for developing the amended OR UPDATED PLAN as described in subsectionS (a) AND (B), are eligible for reimbursement.

§ 83.215. Funding limitations.

(a) The Commission will limit individual awards in the amounts it deems appropriate for the particular classification of operation.

(b) Funding under ~~{this program}~~ THE PLAN DEVELOPMENT INCENTIVES PROGRAM will be limited to a one-time reimbursement payment for initial plan development costs incurred after the ELIGIBLE AGRICULTURAL operator's application has been approved, and as a one-time reimbursement payment for a nutrient management plan

amendment of a plan approved prior to OCTOBER 1, 2006, in order to conform with the revised program criteria.

(c) FUNDING UNDER THE PLAN MAINTENANCE INCENTIVES PROGRAM WILL BE LIMITED TO ONE PAYMENT ANNUALLY FOR UPDATING OR AMENDING AN APPROVED NUTRIENT MANAGEMENT PLAN MEETING THE REQUIREMENTS OF THIS REVISED SUBCHAPTER.

(D) Funding under ~~{this program}~~ BOTH THE PLAN DEVELOPMENT INCENTIVES PROGRAM AND THE PLAN MAINTENANCE INCENTIVES PROGRAM will not be available for planning efforts initiated prior to approval of the request for participation in the program.

§ 83.216. Implementation and reporting.

(a) The Commission will develop implementation and reporting documents defining the terms and conditions under which funding under ~~{this}~~ EACH program will be provided and other documents determined to be necessary by the Commission.

(b) Only plans OR PLAN UPDATES AND AMENDMENTS meeting the requirements of this REVISED subchapter will be eligible for reimbursement under this program.

(c) The ~~{applicant}~~ RECIPIENT OF A PLAN DEVELOPMENT INCENTIVES PROGRAM OR A PLAN MAINTENANCE INCENTIVES PROGRAM AWARD shall maintain financial records for 3 years to substantiate reimbursement expenditures covered by this ~~{program}~~ SUBCHAPTER.

FINANCIAL ASSISTANCE

§ 83.221. Applicant eligibility.

(a) An owner ~~{or operator}~~ of an ~~{existing}~~ agricultural operation [existing as of October 1, 1997] EXISTING AS OF OCTOBER 1, 2006, may apply for financial assistance for the implementation of plans developed under the act. The owner ~~{or operator}~~ shall have legal and financial responsibility for the agricultural operation during the term of the financial assistance provided by the Commission.

(b) Existing CAOs required to implement BMPs to conform with the revised criteria OF THIS SUBCHAPTER are eligible for financial assistance for the implementation of the BMPs.

(c) New agricultural operations coming into existence after OCTOBER 1, 2006 are not eligible for financial assistance for the implementation of their approved plan, INCLUDING THE BMPS IN THE PLAN.

~~(d) {If the applicant is a lessee or operator, the applicant shall apply jointly with the owner of the agricultural operation for financial assistance. The {lessee or operator and} owner shall be {jointly} responsible for the repayment of financial assistance unless the agreement establishes the lessee or operator as having joint or principal responsibility.}~~

{(e)} EXISTING {CAOs} NMP OPERATIONS HAVING AN APPROVED NUTRIENT MANAGEMENT PLAN that ARE CURRENTLY OR were in violation of the plan submission requirements OR ANY OTHER REQUIREMENTS of this act prior to OCTOBER 1, 2006, are not eligible for funding under this program.

~~(f)-(E)~~ **Existing agricultural operations expanding to become a CAO after OCTOBER 1, 2006, are not eligible for financial assistance for the implementation of their approved plan, INCLUDING THE BMPS IN THE PLAN.**

(F) ONLY THOSE AGRICULTURAL OPERATIONS HAVING OVER EIGHT AEUS ARE ELIGIBLE TO RECEIVE FINANCIAL ASSISTANCE FOR THE IMPLEMENTATION OF THEIR APPROVED PLAN, INCLUDING THE BMPS IN THE PLAN.

§ 83.222. Condition for receipt of financial assistance.

(A) An agricultural operation approved to receive financial assistance under the Chesapeake Bay Nonpoint Source Pollution Abatement Program after [October 1, 1997] **after OCTOBER 1, 2006**, or otherwise receiving financial assistance under the act for plans, shall agree to develop and implement a plan as a condition for receiving the financial assistance.

(B) A RECIPIENT OF FINANCIAL ASSISTANCE UNDER THIS SUBCHAPTER SHALL BE OBLIGATED TO MAINTAIN THE BMPS FUNDED BY SUCH FINANCIAL ASSISTANCE AND CONTINUE TO IMPLEMENT AND ADHERE TO THE PROVISIONS OF THE PLAN, THE ACT AND THESE REGULATIONS FOR 10 YEARS FOLLOWING RECEIPT OF THE FUNDS.

§ 83.223. Financial assistance eligibility criteria.

(a) The Commission will consider the following criteria in reviewing applications for financial assistance:

(1) Whether the project will improve the health, safety or environment of the people of this Commonwealth and otherwise satisfy the purposes of the act and this subchapter.

(2) The long-term financial or operational viability, or both, of the agricultural operation.

(3) The cost effectiveness of the proposed BMPs in comparison with other alternatives.

(4) The applicant's ability to operate and maintain the BMPs in a proper manner.

(b) Only those BMPs listed in an approved plan or plan amendment are eligible to receive funding under the plan implementation category of the Financial Assistance Program.

§ 83.224. Project evaluation and prioritization criteria.

(a) Applications for financial assistance will be evaluated in accordance with project evaluation criteria guidelines developed by the Commission. **[CAOs will receive priority evaluation from October 1, 1997, to September 30, 1998.]**

(b) Applications for financial assistance will be prioritized for consideration as follows:

(1) **CAOs in [existence on October 1, 1997, complying with the act and this subchapter] compliance with the act and properly implementing a plan approved prior to OCTOBER 1, 2006 which, due to the revisions to the regulations, are required to implement additional practices to meet the new criteria.**

(2) EXISTING agricultural operations newly classified as CAOs due to the revised criteria established in this AMENDED subchapter.

[2] (3) EXISTING AGRICULTURAL OPERATIONS THAT BECOME CAOs
[coming into existence] after [October 1, 1997] OCTOBER 1, 2006, due to loss of rented
acres.

(4) VAOs having an approved plan as of OCTOBER 1, 2006.

[(3)] (5) [Other [non-CAOs] VAOs with critical BMPs.]

[(4)] [(6)] [Other agricultural operations:] OTHER AGRICULTURAL OPERATIONS
IN EXISTENCE AS OF OCTOBER 1, 2006.

§ 83.225. Application procedure.

(a) An application for financial assistance shall be made on forms approved by the Commission and shall be addressed to the Commission or a delegated agent.

(b) An application received by the Commission or delegated agent will be reviewed for completeness and eligibility. An application shall include a [summary] copy of the approved plan which identifies the proposed BMPs for which financial assistance is being requested.

(c) If the application is determined to be incomplete, the Commission or a delegated agent will provide the applicant with a written explanation of the reasons for the determination, and request the additional information needed to complete the application process.

(d) ~~[The Commission will approve or deny each application submitted.]~~ Within ~~[45]~~ 60 days of receipt of all required information, applicants will be notified in writing of actions taken on their applications and ~~[their]~~ any right to appeal the actions.

(e) The applicant may appeal a decision of the Commission to the EHB as provided for in ~~[section 15 of the act (3 P. S. § 1715)]~~ SECTION 517 OF THE ACT (3 P.C.S.A. § 517).

§ 83.226. Eligible costs for the implementation of an approved plan.

(a) Eligible project costs considered by the Commission shall be the costs necessary to implement the plan and may include the following:

(1) Project design and engineering including plans, specifications, cost estimates, certifications and surveys.

(2) Costs associated with obtaining the financial assistance and may include loan origination or loan application fees, or both, title fees and filing fees.

(3) Project construction, including labor, materials, machinery, equipment and site preparation associated with the project.

(4) COSTS ASSOCIATED WITH THE IMPLEMENTATION OF A COVER

CROPPING BMP, IN RESPONSE TO THE REQUIREMENT contained under §

83.294(f)(ix)(A) OF THIS SUBCHAPTER.

(5) Other costs the Commission has determined to be necessary.

(b) Funds encumbered or advanced for the project which are not used for eligible costs in the project shall be returned to the fund or account from which they originated for reallocation and use in the implementation of other plans.

(c) The Commission may consider alternative manure technology practices and equipment eligible to receive financial assistance under this [regulation] SUBCHAPTER if these practices or equipment are considered to be effective in addressing nutrient management issues on the AGRICULTURAL operation. Financial assistance funding levels and limitations for these alternative practices and equipment shall be established by the Commission. THESE ELIGIBLE PRACTICES MAY BE APPROVED TO SERVICE AN INDIVIDUAL OPERATION OR MAY SERVICE MORE THAN ONE OPERATION IF APPROVED BY THE COMMISSION. FOR MULTI-PARTNERED PROJECTS, ALL FARMS PROVIDING MANURE FOR THE PROJECT MUST AGREE TO AMEND AN EXISTING PLAN OR DEVELOP AND IMPLEMENT A NEW APPROVED NUTRIENT MANAGEMENT PLAN MEETING THE PROVISIONS OF THIS SUBCHAPTER.

§ 83.227. Loans.

- (a) The Commission will issue loans and set applicable terms and conditions it deems appropriate. The Commission may consider factors it deems relevant, including the following:
- (1) Current market interest rates.
 - (2) The financial ability of the applicant to repay.
 - (3) The necessity to maintain the fund in a financially sound manner.
- (b) Loans may be based on the ability to repay from future revenue to be derived from the applicant's agricultural operation. Loans may be secured by a mortgage or the security interest, or both, or by any other fiscal manner which the Commission deems appropriate. The minimum rate of interest to be paid on any loan made is 1%.

- (c) The term of loans may not exceed 10 years from the day the loan agreements are executed.
- (d) The Commission may defer the initiation of the repayment of principal up to 12 months from the date the loan agreements are executed. The borrower may begin principal and interest payments sooner than required, if the borrower so desires.

§ 83.228. Loan guarantees.

The Commission may make loan guarantees if the Commission determines that it is an appropriate method to accomplish the purposes of the act or this subchapter.

§ 83.229. Grants.

(a) A grant will be considered when funds have been made available to the Commission and the Commission determines that the financial condition of the recipient is such that the repayment of a loan is unlikely and that the recipient will be financially distressed by the implementation of BMPs without a grant.

(b) The Commission may limit individual grant awards to whatever amount it deems appropriate. The maximum amount of a grant may not exceed those maximum grant limits established by the Commission. An agricultural operation that has received or is approved to receive financial assistance under **[the Chesapeake Bay Nonpoint Source Pollution Abatement Program]** any local, state, federal or other financial assistance program **[is]** may also be eligible for grants under the Nutrient Management **[Financial Assistance]** Plan Implementation Grant Program up to the grant limit established by the Commission in grants

from those combined sources [of the Chesapeake Bay Program] and the Nutrient Management [Financial Assistance] Plan Implementation Grant Program.

(c) A grant will be made subject to the terms and conditions the Commission establishes.

§ 83.230. Grants and loans.

The Commission will, when it deems it appropriate and to the extent financial circumstances permit, mix grant funds with loan funds.

§ 83.231. Funding limitations.

(a) *Total funding limits.* Total assistance provided under loans, grants and loan guarantees for the implementation of a single plan may not exceed those funding limits established by the Commission.

(b) *Partial funding.* The Commission reserves the right to provide funding for only a portion of the total costs of the project or only a portion of the amount requested in a financial assistance application.

(c) *Least cost alternative.* Financial assistance provided may not exceed that amount necessary for the least-cost alternative for each BMP included.

(d) *Limitation.*

(1) No financial assistance will be made available that might jeopardize or compromise the fund.

(2) Financial assistance will not be available for refinancing.

(3) Financial assistance will not be available for BMPs if construction is initiated prior to submission of an application for financial assistance, unless a letter of no prejudice has been issued by the Commission as provided in subsection (e).

(e) *Letters of no prejudice.* Exceptions to the general prohibition against initiation of construction prior to consideration by the Commission may be made when **CIRCUMSTANCES REQUIRE immediate plan implementation ~~is required~~** to proceed before an application for financial assistance can be submitted to the Commission. **Circumstances that would require immediate plan implementation and therefore appropriate for consideration by the Commission for a letter of no prejudice, shall relate to acute failures or malfunctions of practices where immediate implementation is necessary to address significant environmental degradation.** In this case, a potential applicant may apply to the Commission for a letter of no prejudice wherein the Commission agrees to consider a future application for financial assistance without limitation or prejudice even if project construction has begun at ~~that~~ **THE time OF THE FUTURE APPLICATION FOR FINANCIAL ASSISTANCE. THE APPLICATION FOR A LETTER OF NO PREJUDICE SHALL SET FORTH, IN DETAIL, THE EXACT REASON OR REASONS A LETTER OF NO PREJUDICE IS NECESSARY AND SHOULD BE GRANTED. THE APPLICATION FOR AND APPROVAL OF A LETTER OF NO PREJUDICE SHALL OCCUR PRIOR TO THE START OF PROJECT CONSTRUCTION.** If the Commission issues a letter of no prejudice, project construction can begin without jeopardizing or benefiting a future application.

§ 83.232. Implementation and reporting.

(a) The Commission will develop financial assistance documents which will define the terms and conditions under which the financial assistance is offered and specify other documents determined to be necessary by the Commission.

(b) Unless otherwise approved by the Commission, the ~~{applicant}~~ **RECIPIENT OF FINANCIAL ASSISTANCE UNDER THIS SUBCHAPTER** shall begin construction of the project, in accordance with its **APPROVED** application within ~~[6]~~ **9** months ~~[after]~~ **of the Commission sending notice of approval of a grant OR LOAN application [by the Commission]**. If the applicant does not begin implementation within the specified time period, **does not [and] continue work without unreasonable interruption, or does not complete the project within the specified time period in the grant agreement,** the financial assistance may be withdrawn by the Commission.

(c) Design and construction of BMPs shall conform to the standards found in the *Pennsylvania Technical Guide*. The applicant may not significantly deviate from the scope, design or time schedule for a project unless prior written approval is given by the Commission or delegated agent. The term "scope," as used in this subsection, means the extent of project activities determined by the Commission to be eligible for financial assistance.

(1) A request for significant changes in scope shall be submitted in writing to the Commission for approval. When changes in scope require a plan amendment under the criteria of § 83.371 or § 83.481 (relating to plan amendments), the applicant shall provide a copy of the approved plan amendment.

(2) Funding eligibility for a change in scope will be based on the criteria described in § 83.223 (relating to financial assistance eligibility criteria). Consent of the Commission to a change in scope will not be deemed to increase the amount of financial assistance provided without the express approval of the Commission. Funding for changes in the scope of an assistance project will be approved only in the following circumstances:

(i) The change in scope is a result of new or revised requirements, Federal legislation, or a Federal regulation thereunder, State legislation or State regulation thereunder, the act, this subchapter, The Clean Streams Law (35 P. S. § § 691.1—691.1001) or regulations thereunder.

(ii) The change in scope is necessary to protect the structural or process integrity of the facilities.

(iii) Adverse conditions are identified during the construction of the facilities which could not have been foreseen by the design engineer prior to encountering the condition.

(iv) The change is necessary to relieve emergency conditions occurring during construction of the facilities.

(d) A request for a disbursal of financial assistance shall be on forms approved by the Commission, shall include a statement certifying the project was completed as planned, and shall be submitted on a schedule approved by the Commission.

(e) The applicant shall maintain project progress and financial records to substantiate expenditures, as well as plan implementation records as outlined in § § 83.341—83.344 for CAOs or § § 83.451—83.453 for volunteers.

(f) If the applicant fails to comply with this section, the Commission may withdraw the remaining funds allocated to the project, as well as take other action which it is legally entitled to take.

§ 83.233. Delegation of financial assistance.

(a) Under section 4(3) of the Conservation District Law (3 P. S. § 852(3)) and subject to this section, the Commission may by written agreement delegate to one or more agents the administration of the financial assistance provisions of this subchapter in § § 83.221—83.232. The Commission will retain final approval authority for all applications for financial assistance.

(b) To the extent delegated by the agreement, the delegations may include the authority to review and make recommendations to the Commission on applications for financial assistance under the act and this subchapter and to exercise other powers and duties otherwise vested in the Commission to administer the Financial Assistance Program. The Commission will retain final approval authority for all applications for financial assistance received by a delegated agent.

(c) A delegation agreement shall:

- (1) Specify the powers and duties to be performed by the delegated agents.
- (2) Provide for the commitment of sufficiently trained staff and resources to perform the process and duties to be delegated.
- (3) Require the delegated agent to maintain records of activities under the delegation.
- (4) Provide for the monitoring and supervision by the Commission of performance by the delegated agents of the functions delegated under the agreement.

(d) When the Commission delegates one or more of its powers and duties to an agent, the Commission will retain the concurrent power to administer the financial assistance provisions of this subchapter.

DELEGATION TO LOCAL AGENCIES

§ 83.241. Delegation to local agencies.

(a) ~~{Under section 4(8) of the act (3 P. S. § 1704(8)) and subject to this section, the}~~ THE

Commission may by written agreement delegate to a conservation district one or more of its administrative or enforcement authorities under the act.

(b) The delegation of administrative or enforcement authority may be made to a conservation district when the district demonstrates it has or will have an adequate program and sufficient resources to accept and implement the delegation.

(c) To the extent delegated by the agreement, the delegations may include the authority to enforce the act and this subchapter and to exercise other powers and duties otherwise vested in the Commission to implement the act.

(d) A delegation agreement ~~[shall]~~ will:

- (1) Specify the powers and duties to be performed by the delegated district.
- (2) Provide for the commitment of sufficient trained staff and resources to perform the powers and duties to be delegated.
- (3) Require the delegated conservation district to maintain records of activities performed under the delegation.

- (4) Provide for the monitoring and supervision by the Commission of performance by the delegated conservation district of the functions delegated under the agreement.
- (e) When the Commission delegates one or more of its powers and duties to a delegated conservation district, the Commission will retain the concurrent power to administer and enforce the act and this subchapter.

COMPLIANCE PLANS

§ 83.251. Compliance plans.

An agricultural operation found to be in violation of The Clean Streams Law (35 P. S. § § 691.1—691.1001) may be required to submit a plan that meets the requirements of the act and ~~§ § 83.261—83.381~~ **THIS SUBCHAPTER** within 3 months or notification thereof and ~~shall be implemented~~ **TO IMPLEMENT THE PLAN** in accordance with the schedule as approved.

NUTRIENT MANAGEMENT PLANS

§ 83.261. General.

~~[(a)] [A CAO in existence on October 1, 1997, shall submit to the Commission or a delegated conservation district, a plan by October 1, 1998.]~~

~~[Agricultural operations]~~ **NMP OPERATIONS shall meet the plan requirements of §§ 83.261—83.491** §§ 83.251 – 83.381 according to the following:

(1) Operations defined as a CAO prior to OCTOBER 1, 2006.

i. For operations defined as CAOs operating as of October 1, 1997, a plan shall have been submitted prior to October 1, 1998.

ii. For operations which were newly defined as a CAO due to expansion of operations prior to OCTOBER 1, 2006, a plan shall have been submitted within 3 months of the change in operations which classified them as a CAO.

iii. For new operations defined as CAOs and commencing before OCTOBER 1, 2006 a plan shall have been submitted prior to commencement of operations.

[(b)] [A CAO which comes into existence after October 1, 1997, shall submit to the Commission or a delegated conservation district a plan by January 1, 1998, or prior to the commencement of manure operations, whichever is later. It is recommended that the CAO submit the plan for review and approval prior to construction.] (2) Operations defined as a CAO after OCTOBER 1, 2006 who were not defined as CAOs prior to that date. An existing agricultural operation as of OCTOBER 1, 2006 which did not meet the CAO definition prior to OCTOBER 1, 2006 but which is defined as a CAO under this subchapter as amended, shall submit a plan by OCTOBER 1, 2008.

[(c)] [An agricultural operation which, because of expansion of animal units or loss of land suitable for manure application, meets the criteria for a CAO shall submit to the Commission or a delegated conservation district a plan within 3 months after the date of completion of the expansion or the loss of land. It is recommended that an operator who intends to expand an existing agricultural operation submit the plan for review and approval prior to expansion] (3) Operations that become defined as CAOs after OCTOBER 1, 2006 due to expansion of an existing operation or loss of rented or leased land. Existing operations that make changes to their operations that result in becoming defined as CAOs for the first time [1] after OCTOBER 1, 2006, shall meet the following:

(i) An agricultural operation which becomes a CAO after OCTOBER 1, 2006, due to loss of land suitable for manure application, shall submit a plan within 6 months after the date which the operation becomes a CAO.

(ii) An agricultural operation which will become a CAO due to expansion of operations by the addition of animals shall obtain approval of the plan prior to the expansion.

[(d)] [An agricultural operation other than a CAO may voluntarily submit a plan at any time after October 1, 1997. It is recommended that the operator of an agricultural operation voluntarily submitting a plan under the act, submit the plan for review and approval prior to construction, if construction activities are called for in the plan] (4) *New Operations.* A new operation which will commence after OCTOBER 1, 2006, and which will be a CAO, shall obtain approval of a plan meeting the requirements of this subchapter prior to the commencement of the operation.

(5) AN AGRICULTURAL OPERATION OTHER THAN A CAO MAY VOLUNTARILY SUBMIT A PLAN AT ANY TIME AFTER OCTOBER 1, 1997.

(6) *Revision of plans approved prior to OCTOBER 1, 2006, All operations {(CAOs and VAOs)}* having an approved plan prior to OCTOBER 1, 2006, shall comply with the following:

(i) CAOs, AND OPERATIONS REQUIRED TO DEVELOP COMPLIANCE PLANS PURSUANT TO § 506(J) OF THE ACT, shall submit an amended plan to ~~incorporate the requirements included in this amended Subchapter~~ ADDRESS ALL OF THE REQUIREMENTS OF THIS SUBCHAPTER, INCLUDING MANAGEMENT OF

PHOSPHORUS AND EXPORTED MANURE, pursuant to the 3 year review requirement of §83.362, or by OCTOBER 1, 2007, whichever is later.

(ii) VAOs shall submit an amended plan on the same schedule as CAOs in subparagraph (i) if they desire to maintain their status as a VAO.

(iii) VAOs that received funding under this subchapter shall implement the ~~approved~~ plan APPROVED PRIOR TO OCTOBER 1, 2006, and maintain the BMPs installed using that funding FOR TEN YEARS FOLLOWING IMPLEMENTATION OF THE BMP.

(7) The plan shall be submitted to the Commission or delegated conservation district by the operator who shall sign the plan.

[(e)] (8) QUALIFICATIONS. Plans ~~{and plan amendments}~~ shall be developed by nutrient management specialists certified in accordance with the Department of Agriculture's Nutrient Management Specialist Certification requirements in 7 Pa. Code § § 130b.1—130b.51 (relating to nutrient management certification). The specialists shall certify, by signature, that the plans are in accordance with the act and this subchapter. ~~{Operators and specialists who sign plans may be subject to penalties for any false information contained in the plans}.~~

(9) SIGNATURE REQUIREMENTS. PLANS SHALL BE SIGNED BY THE OPERATOR OF THE AGRICULTURAL OPERATION INDICATING CONCURRENCE WITH THE INFORMATION IN THE PLAN AND ACCEPTANCE OF RESPONSIBILITIES UNDER THE PLAN. THE FOLLOWING SIGNATURE REQUIREMENTS APPLY:

(i) FOR SOLE PROPRIETORSHIPS, THE PROPRIETOR.

(ii) FOR PARTNERSHIPS, A GENERAL PARTNER.

(iii) FOR CORPORATIONS, A VICE PRESIDENT, PRESIDENT OR AUTHORIZED REPRESENTATIVE. THE PLAN SHALL CONTAIN AN ATTACHMENT EXECUTED BY THE SECRETARY OF THE CORPORATION WHICH STATES THAT THE PERSON SIGNING ON BEHALF OF THE CORPORATION IS AUTHORIZED TO DO SO.

(10) FOR OPERATIONS THAT INCLUDE RENTED OR LEASED LANDS, THE OPERATOR SHALL SIGN A STATEMENT IN THE PLAN INDICATING THE FOLLOWING:

(i) THE OWNERS OF THESE LANDS HAVE BEEN PROVIDED NOTICE THAT A NUTRIENT MANAGEMENT PLAN HAS BEEN DEVELOPED WHICH INCLUDED THE OWNER'S LANDS.

(ii) NONE OF THE OWNERS INDICATED ANY OBJECTION TO THE APPLICATION OF NUTRIENTS TO THEIR OWN LANDS.

(11) OPERATORS AND SPECIALISTS WHO SIGN PLANS MAY BE SUBJECT TO PENALTIES FOR ANY FALSE INFORMATION CONTAINED IN THE PLANS.

§ 83.262. Identification of CAOs.

(a) *Procedure.* To determine if a particular agricultural operation is a CAO [which is required to develop a plan], the number of AEUs per acre on the agricultural operation shall be calculated using the following procedure:

(1) The number of AEU's on the agricultural operation shall be calculated by using the following steps:

(i) [Multiply] Compute the animal weight ~~for a typical production day~~ for the agricultural operation by multiplying the average number of animals on the agricultural operation ~~for a typical production day~~ by the standard animal weight ~~contained in~~ [Table A to equal a total weight] ~~*Agronomy Facts 54—Pennsylvania's Nutrient Management Act: Who Will Be Affected?*, published by the Pennsylvania State University~~ **USED BY THE LIVESTOCK INDUSTRY IN PENNSYLVANIA. THE STANDARD WEIGHTS CONTAINED IN GUIDANCE PUBLISHED BY THE COMMISSION MAY BE USED TO MEET THIS REQUIREMENT.** [Nonstandard] Other animal weights may be used in place of those in [Table A,] ~~*Agronomy Facts 54*~~ **THE COMMISSION GUIDANCE**, if there is sufficient documentation to support ~~the~~ **THEIR** use ~~of the nonstandard weights~~. For those animal types not included in [Table A] ~~*Agronomy Facts 54*~~ **THE COMMISSION GUIDANCE**, the average animal weight for the operation shall be used for this calculation, taking into account, if applicable, the range of animal weights throughout the ~~production cycle of the animal~~ **TIME THE ANIMALS ARE ON THE OPERATION.**

(ii) [Multiply] Annualize the average animal weight per ~~production~~ day by multiplying the [total] animal weight [reached] ~~for a typical production day~~ derived in subparagraph (i) by the number of ~~production~~ days per year **THAT THE ANIMALS ARE ON THE OPERATION**, then divide by 365 days.

(iii)[Divide] Compute the number of AEUs for the particular animal type by dividing the number [reached] derived in subparagraph (ii) by 1,000 [to equal the number of AEUs for each type of animal].

(iv) [Total the number] Compute the AEUs for the operation by adding together the number of AEUs for each type of animal to equal the total number of AEUs on the agricultural operation.

(v) Operations having less than eight AEUs are not classified as CAOs regardless of the animal density.

[Table A

<i>Type of Animal</i>	<i>Standard Weight in Pounds During Production (Range)</i>
<i>Swine</i>	
Nursery Pig	30 (15—45)
Finishing Pig	145 (45—245)
Gestating Sow	400
Sow and Litter	470
Boar	450
<i>Beef</i>	
Calf 0—8 Mo.	300 (100—500)

Finishing 8—24 Mo.	850 (500—1,200)
Cow	1,150
<i>Veal</i>	
Calf 0—16 Wk.	250 (100—400)
<i>Poultry</i>	
Layer 18—65 Wk.	3.25 (2.75—3.76)
Layer 18—105 Wk.	3.48 weighted avg.
Layer Brown Egg 20—65 Wk.	4.3 (3.6—5)
Layer Brown Egg 20—105 Wk.	4.63 weighted avg.
Pullets 0—18 Wk.	1.42 (0.08—2.75)
Broiler, Lg. 0—57 Days	3.0 (0.09—5.9)
Broiler, Med. 0—43 Days	2.3 (0.09—4.5)
<i>Roaster</i>	
Male 0—8 Wk.	3.54 (0.09—7)
Female 0—10 Wk.	3.54 (0.09—7)
Turkey, Tom 0—18 Wk.	14.1 (0.12—28)
Turkey, Hen 0—14 Wk.	7.1 (0.12—14)
Duck 0—43 Days	3.56 (0.11—7)
Guinea 0—14 to 24 Wk.	1.9 (0.06—3.75)
<i>Pheasant</i>	

0—13 to 43 Wk. 1.53 (0.05—3)

Chukar

0—13 to 43 Wk. 0.52 (0.04—1)

Quail

0—13 to 43 Wk. 0.26 (0.02—0.5)

Dairy

Holstein/Brown Swiss

Cow 1,300

Heifer 1—2 Yr. 900 (650—1,150)

Calf 0—1 Yr. 375 (100—650)

Bull 1,500

Ayrshire/Guernsey

Cow 1,100

Heifer 1—2 Yr. 800 (575—1,025)

Calf 0—1 Yr. 338 (100—575)

Bull 1,250

Jersey

Cow 900

Heifer 1—2 Yr. 600 (400—800)

Calf 0—1 Yr. 225 (50—400)

Bull 1,000

Sheep

Lamb 0—26 Wk.	50 (10—90)
Ewe	150
Ram	185

Goat

Kid 0—10 Mo.	45 (5—85)
Doe	125
Buck	170

Horse

Foal 0—6 Mo.	325 (125—625)
Yearling	750 (625—875)
Nondraft Breeds, Mature	1,000
Draft Breeds, Mature	1,700]

(2) [The] Compute the number of AEUs per acre [shall be calculated] by dividing the total number of AEUs by the total number of acres of land suitable for the application of manure [to equal the number of AEUs per acre].

(i) [Land suitable, for] For the sole purpose of determining whether an agricultural operation is a CAO, “land suitable for the application of manure” is [~~considered to be~~] land [in] [~~under the management control of the operator,~~] that meets [the] ALL OF THE following [~~criteria~~]:

A. THE LAND IS UNDER THE MANAGEMENT CONTROL OF THE OPERATOR.

~~{A.}~~ **B.** The land is cropland, hayland or pastureland.

C. ~~{that}~~ THE LAND is an integral part of the agricultural operation, as demonstrated by title, rental or lease agreements, crop records or information on a form provided by the Commission.

D. The land is or will be **ANY OF THE FOLLOWING:**

(I) used for the application of manure generated by the agricultural operation,

(II) INCLUDED WITHIN THE AREAS WHERE MANURE MAY NOT BE APPLIED PURSUANT TO § 83. 293(C),

(III) INCLUDED WITHIN THE AREAS WHERE MANURE MAY NOT BE MECHANICALLY APPLIED PURSUANT TO § 83.294(F)-(G).

(ii) The term “land suitable for application of manure” does not include farmstead areas or forest land.

(b) *Example of AEU per acre calculation.* An operation has an average number of 10,000 medium broilers ~~{on a typical production day}~~ with an average weight ~~{during production}~~ of 2.3 pounds. During the year there are six flocks with a production period of 43 days per flock. This amounts to 258 ~~{production}~~ days per year **THAT THE BIRDS ARE ON THE OPERATION.** During the remaining down time, no manure is produced. The farmstead is **[2] two** acres. There are **[3] three** acres of woodlands and **[7] seven** acres of cropland. The following is the AEU per acre calculation for this operation:

Step 1. 10,000 med. broilers x 2.3 lb. avg. wt. = 23,000 lb. total weight

Step 2. 23,000 lb. total weight x 258 ~~[production]~~ days per year divided by 365 days =
16,257 lbs.

Step 3. 16,257 lbs. divided by 1,000 lbs. per AEU = 16.25 AEU's

Step 4. Total number of AEU's on the agricultural operation is 16.25.

Step 5. 16.25 AEU's divided by 7 acres of land suitable = 2.3 AEU's per acre

CONTENT REQUIREMENTS FOR ALL PLANS

§ 83.271. Scope of plan.

Plans developed under the act shall comply with the act and this subchapter.

§ 83.272. Content of plans.

(a) Plans developed for CAOs ~~[or other agricultural operations required by the Commission or the Department to plan under the act]~~, **VAOS AND OPERATIONS REQUIRED TO DEVELOP COMPLIANCE PLANS PURSUANT TO §506(J) OF THE ACT** shall [at a minimum,] comply with § § 83.261 and 83.271—~~[83.331]~~ **83.381**.

(b) [A plan] ~~[Plans developed for]~~ [an agricultural operation under the act either voluntarily, or as a condition of receiving financial assistance under the act or the Chesapeake Bay Nonpoint Source Pollution Abatement Program] ~~[VAOs shall]~~ [at a minimum] ~~[comply with this section and §§ 83.261, 83.271 and 83.391—]~~ [38] ~~[83.441.]~~ **PLAN SHALL FOLLOW THE STANDARDIZED PLAN FORMAT PROVIDED BY THE COMMISSION, UNLESS OTHERWISE APPROVED BY THE COMMISSION.**

(c) ~~A plan shall be organized to~~ [correspond to the appropriate sections described] ~~[contain individual sections as referred to in subsections (a) and (b) as applicable.]~~ [A plan

shall have a separate section for each of these sections.] ~~{The operator shall be}~~ [consulted during] ~~{involved in the development of each}~~ [the preparation of all] ~~{section}~~ [of] ~~{included in the plan.}~~ **THE OPERATOR SHALL BE INVOLVED IN THE DEVELOPMENT OF THE PLAN.**

(d) The BMPs listed in the plan shall be consistent with the management practices listed in other relevant plans, such as ~~{a conservation plan}~~ ~~{the Conservation Plan}~~ **THE AGRICULTURAL EROSION AND SEDIMENT CONTROL PLAN** developed for the operation, unless otherwise [justified in writing by the planner to] approved by the Commission or delegated conservation district.

(E) THE ONLY NUTRIENT ELEMENTS OF CONCERN TO BE ADDRESSED BY BMPS IN THE PLAN, BASED ON THEIR POTENTIAL TO IMPACT THE QUALITY OF SURFACE WATER OR GROUNDWATER, ARE NITROGEN AND PHOSPHORUS. UNLESS THE CONTEXT CLEARLY INDICATES OTHERWISE, "NUTRIENTS" AS USED IN THIS SUBCHAPTER SHALL MEAN NITROGEN AND PHOSPHORUS.

(F) THE PLAN SHALL LIST POTASSIUM CROP NEEDS, AND POTASSIUM APPLICATION RATES, FROM ALL NUTRIENT SOURCES, IN ORDER TO ENSURE THAT ADEQUATE SOIL FERTILITY LEVELS ARE ADDRESSED TO MEET CROP PRODUCTION GOALS.

PLAN SUMMARY INFORMATION ~~{FOR CAO PLANS}~~

§ 83.281. Identification of agricultural operations and acreage.

(a) **Agricultural operation identification sheet.** The plan shall include an agricultural operation identification sheet which shall include the following information:

(1) The operator name, address and telephone number.

(2) **A brief description of the operation including:**

(i) Animal types AND NUMBERS included on the operation.

(ii) ~~{General scope of the operation (general acreage of the cropland, hayland and pastures, and farmstead acres, and animal numbers for the various types of animals on the operation):~~

~~{(iii)} The crop rotation planned to be used on the operation.~~

~~{(iv)} (III) The dimensions, ~~{and}~~ capacity AND FREEBOARD of any existing manure storage facilities on the operation.~~

~~{(v)The capacity and practical application rates of manure application equipment that will be used on the operation, as applicable.}~~

(3) The ~~{signature of the operator, which meets the signature requirements of the Commission, indicating the operator's concurrence with the practices outlined in the plan.}~~

SIGNATURES AND DOCUMENTATION AS REQUIRED BY §83.261.

[(3)] (4) The counties where land included in the plan is located.

[(4)] (5) The watersheds [of] in which the land included in the plan is located. The existence of any special protection waters, as identified in [§ 93.9] Chapter 93 (relating to

~~[designated water uses and water quality criteria]~~ water quality standards), shall also be noted.

~~[(5)] (6)~~ The total acreage of the agricultural operation included in the plan. This acreage shall include:

(i) Lands located at or adjacent to the animal ~~{production}~~ facility, which are owned by the operator of the facility.

(ii) Other owned, rented or leased lands, under the management control of the operator of the facility, that are used for the application, treatment or storage of manure generated at the facility. THE PLAN SHALL INCLUDE THE NAMES AND ADDRESSES OF OWNERS OF THE RENTED AND LEASED LANDS.

~~[(6)] (7)~~ The total acreage of land of the agricultural operation on which nutrients shall be applied. The total acreage shall be separated into acres of owned land and acres of rented or leased land.

~~[(7)] (8)~~ The TOTAL number of AEUs ON THE OPERATION, AND THE NUMBER OF AEUS per acre on the agricultural operation.

~~[(8)] (9)~~ The name ~~[and]~~, nutrient management certification program identification number ~~[,]~~ and signature of the nutrient management specialist that prepared the plan ~~{,}~~ AND the date of plan preparation ~~{and the date of revisions, if any}~~.

~~(b)~~ Maps and aerial photographs. The plan shall include a topographic map drawn to scale identifying the lands included in the agricultural operation, INCLUDING THE LAND DESCRIBED IN SUBPARAGRAPH (a)(6), and shall also contain maps or aerial photographs of sufficient scale which clearly identify:

- (1) The location and boundaries of the agricultural operation.
- (2) Individual field boundaries under the plan.
- (3) Field number and acreage of each field.
- (4) The identification of all soil types and slopes on the agricultural operation. An NRCS soil survey map with the soil identification legend **[shall] will** be sufficient to satisfy this requirement. These soil survey maps may be available at the county NRCS office or conservation district office.

(5) The location of areas where manure application **[may be limited based on] is restricted under § 83.294[(5)](f) – (G)** (relating to nutrient application procedures).

(6) The location of proposed or existing structural BMPs, including manure storage facilities, on the operation.

(7) The location of proposed or existing ~~temporary~~ EMERGENCY manure stacking areas or in-field stacking locations.

(8) THE NAMES OF THE ROADS ADJACENT TO OR WITHIN THE AGRICULTURAL OPERATION.

(c) Phosphorus ~~Index~~. The plan shall include an appendix containing INFORMATION AND CALCULATIONS USED TO COMPLY WITH §83.293(C). IF THE PHOSPHORUS INDEX IS USED, THE INFORMATION SHALL INCLUDE the completed Phosphorus Index spreadsheet or other similar information summary which shall list the individual source and transport factor values, as appropriate, and the final Phosphorus Index ~~value~~ RESULT, for each individual area evaluated on the operation, as ~~required by~~ DEVELOPED PURSUANT TO the Phosphorus Index.

(d) Agreements with importers and brokers. The plan shall include an appendix containing signed exporter/importer and exporter/broker agreements, and nutrient balance sheets and associated maps, for operations where these documents are required under this subchapter.

(E) SOIL TEST RESULTS. THE PLAN SHALL INCLUDE AN APPENDIX CONTAINING A SUMMARY OF THE RESULTS OF ALL SOIL TEST ANALYSES PERFORMED ON THE OPERATION. THE SUMMARY SHALL MEET THE REQUIREMENTS OF §83.292(E)(3).

§ 83.282. Summary of plan.

(a) The plan shall contain a summary that includes:

(1) A [chart] **manure summary table** listing:

- (i) The total amount of manure **planned to be** generated on the operation annually.
- (ii) The total amount of manure **planned** to be used on the operation annually.
- (iii) The total amount of manure **planned** to be exported from the operation annually.

(2) [Nutrient] **A nutrient application [rates by field or crop group] summary documenting the planned nutrient applications for each crop management unit listing:**

- (i) **Acres.**
- (ii) **Expected yield.**
- (iii) **Nutrients applied as starter chemical fertilizer.**
- (iv) **Planned manure application period.**
- (v) **Planned manure application rate and type of manure to be applied.**

(vi) Planned manure incorporation time.

(vii) Rate of other organic nutrient sources planned to be applied.

(viii) Other nutrients applied through chemical fertilizer.

(ix) Other comments or notes.

(3) [Procedures] **General procedures** and provisions for the utilization or proper disposal of excess manure.

(b) [Manure] **The summary shall ~~also reference manure~~ INCLUDE THE FOLLOWING INFORMATION ON PLANNED BMPS:**

(1) PLANNED MANURE management and storage practices, stormwater runoff control practices and other appropriate BMPs necessary to protect the quality of surface water and groundwater **[shall be referenced in the summary].**

(2) THE SCHEDULE FOR IMPLEMENTATION OF THE PLANNED BMPS.

(3) THE LOCATIONS OF PLANNED BMPS ON THE AGRICULTURAL OPERATION.

NUTRIENT APPLICATION ~~[FOR CAO PLANS]~~

§ 83.291. Determination of available nutrients.

(a) The plan shall **[include the amount of] address** each type of nutrient source **[used] generated or planned to be used** on the **agricultural** operation, including: manure, **[sludges] biosolids,** compost, **[cover crops,]** commercial fertilizers and other **[nutrients that will be applied to the agricultural operation] nutrient sources.** **NITROGEN AND PHOSPHORUS**

**ARE THE ONLY NUTRIENT ELEMENTS OF CONCERN TO BE ADDRESSED BY
BMPS IN THE PLAN.**

**(b) THE PLAN SHALL LIST POTASSIUM CROP NEEDS, AND POTASSIUM
APPLICATION RATES, FROM ALL NUTRIENT SOURCES, IN ORDER TO ENSURE
THAT ADEQUATE SOIL FERTILITY LEVELS ARE ADDRESSED TO MEET CROP
PRODUCTION GOALS.**

**(C) The amount and nutrient content of each manure [to be applied] group generated on the
agricultural operation shall be [determined] documented in the plan as follows:**

**(1) [The plan shall include] List the average number of animals [of each animal type] for
each manure group, [on a typical production day, for] ON the agricultural operation.**

**(2) [The] List the amount of manure [produced] generated and when it is available for
[spreading] land application on the agricultural operation or for other planned uses.**

**(I) If actual manure production records are available for the operation, these
records shall be used for determining the manure produced on the operation.**

**(II) If actual records of manure production do not exist for the operation, the
amount of manure produced shall be calculated based on the average number of [AEUs]
animal units on the agricultural operation [or actual production data], and the storage capacity
of manure storage facilities, if present. [Bedding, wash water, rain and runoff, when mixed
with the manure, shall be included in determining the total volume of manure] [to be
applied] [generated.] The plan shall include the calculations or variables used for
determining the amount of manure produced on the operation.**

(3) Test the nutrient content of manure as follows:

(i) Analytical manure testing results shall be used in the development of the plan.

These manure tests shall include an analysis of the percent solids, total nitrogen (as N), ammonium nitrogen (as NH₄-N), total phosphate (as P₂O₅), and total potash (as K₂O), for each manure group generated on the operation, and these analytical results shall be recorded in the plan. [For the preparation of the plan and plan amendments, it is recommended that the nutrient content of the manure be determined by]

(II) These manure analyses shall be performed using ~~{accepted}~~ manure sampling and chemical analysis methods ~~{as}~~ [outlined in the *Manure Management Manual*, or the *Pennsylvania Agronomy Guide*] ~~{specified by the Commission}~~ WHICH ACCURATELY REPRESENT THE CONTENTS OF THE MANURE. METHODS DESCRIBED IN THE *PENNSYLVANIA AGRONOMY GUIDE* MAY BE USED TO MEET THIS REQUIREMENT. OTHER METHODS MUST BE APPROVED BY THE COMMISSION.

~~{(ii)}~~ (III) [When sampling and analysis is not done, the nutrient management specialist] For newly proposed operations, and for manure groups on existing operations where sampling and analysis are not possible prior to initial plan development, the FOLLOWING APPLIES:

A. The plan shall use either standard book values ~~{such as those contained in the}~~ [Manure Management Manual or the] ~~{Pennsylvania Agronomy Guide to determine the nutrient content of the manure}~~ [.] , or analytical results from a similar facility ~~{using a like management scheme,}~~ as approved by the Commission or delegated conservation district.

B. STANDARD BOOK VALUES CONTAINED IN THE PENNSYLVANIA

**AGRONOMY GUIDE MAY BE USED TO MEET THIS REQUIREMENT. OTHER
VALUES MUST BE APPROVED BY THE COMMISSION.**

**C. A SIMILAR FACILITY IS ONE THAT USES SIMILAR ANIMAL
HOUSING, ANIMAL GROUPS, FEEDING PRACTICES AND WASTEWATER
MANAGEMENT.**

**D. The nutrient content of the manure, AS DETERMINED IN A – C, shall be
recorded in the plan.**

**E. Samples and chemical analysis of the manure generated on the operation
shall be obtained within ~~{1}~~ ONE year of implementation of the approved plan, and the
requirements of § 83.371 (relating to plan amendments) shall be followed as applicable.**

**~~[(iii)] (IV) THE NUTRIENT CONTENT OF MANURE DEPOSITED ON
PASTURES BY GRAZING ANIMALS SHALL BE DETERMINED USING THE
METHODS CONTAINED IN (VI).~~**

**(V) After approval of the initial plan, manure tests are required to be taken
annually for each manure group generated on the operation.**

**(VI) THE TESTING DESCRIBED IN THIS SUBSECTION WILL NOT BE
REQUIRED FOR MANURE GROUPS ASSOCIATED WITH LESS THAN FIVE AEUS
OF LIVESTOCK OR POULTRY AT AN OPERATION. FOR THESE SMALL
QUANTITY MANURE GROUPS, THE NUTRIENT CONTENT OF THE MANURE
MAY BE DETERMINED USING STANDARD BOOK VALUES WHICH REPRESENT
THE CONTENTS OF THE MANURE FOR THE OPERATION. STANDARD BOOK**

VALUES CONTAINED IN THE *PENNSYLVANIA AGRONOMY GUIDE* MAY BE USED TO MEET THIS REQUIREMENT. OTHER VALUES MUST BE APPROVED BY THE COMMISSION OR DELEGATED CONSERVATION DISTRICT.

(VII) TESTING OF MANURE GROUPS MAY BE CONSOLIDATED WHERE TWO OR MORE MANURE GROUPS ON THE SAME OPERATION ARE PRODUCED BY THE SAME ANIMAL TYPE AND ARE MANAGED IN A SIMILAR MANNER.

~~{(e)}~~ **(D)** The nitrogen available from manure shall be based on ~~{the appropriate availability factors such as those contained in the}~~ [Manure Management Manual or the] ~~{*Pennsylvania Agronomy Guide*}~~ **AVAILABILITY FACTORS WHICH ACCURATELY REPRESENT THE CHARACTERISTICS OF THE MANURE. FACTORS DESCRIBED IN THE *PENNSYLVANIA AGRONOMY GUIDE* MAY BE USED TO MEET THIS REQUIREMENT. OTHER METHODS MUST BE APPROVED BY THE COMMISSION.**
The **plan shall include the** amount of nitrogen available in the manure, and the planned manure incorporation time used to determine the nitrogen available [, **shall be included in the plan**].

~~{(d)}~~ **(E)** The residual nitrogen from legume crops and **PREVIOUS** applications of manure ~~{, as described in the *Pennsylvania Agronomy Guide*,~~ shall be **DETERMINED USING VALUES WHICH REPRESENT THE COMMON NITROGEN RESIDUALS FROM THE PAST CROPS AND MANURE APPLICATIONS AT THE OPERATION. STANDARD BOOK VALUES CONTAINED IN THE *PENNSYLVANIA AGRONOMY GUIDE* MAY BE USED TO MEET THIS REQUIREMENT. OTHER VALUES MUST BE APPROVED BY THE COMMISSION. THE VALUES SHALL BE** recorded in the plan and credited when determining nutrient application rates.

[(e) For the development of the initial plan, soil tests shall be required to represent the fields in the operation for phosphorus (P), potassium (K), soil pH and lime requirement using those procedures for the Northeastern United States, Bulletin #493, published by the University of Delaware, or other Commission approved procedures. Soil tests conducted within the previous 3 years prior to submitting the initial plan are acceptable. After the approval of the initial plan, soil tests shall be required at least every 6 years from the date of the last test. Soil tests, or the results of the soil tests, are not required to be submitted with the plan, but shall be kept on record at the operation.]

§ 83.292. Determination of nutrients needed for crop production.

(a) The plan shall include the acreage and realistic expected crop yields for each crop **[group]** **management unit**.

(b) For the development of the initial plan, expected crop yields may not exceed those considered realistic for the soil type and climatic conditions, as set by the operator and the specialist, and approved by the Commission or delegated conservation district. If actual yield records are available during the development of the initial plan, the expected crop yields **[may]** **shall** be based on these records.

[(1)] (c) If after the first 3 years of implementing the plan, the yields do not average at least 80% of the planned expected yield, the plan shall be amended to be consistent with the documented yield levels unless sufficient justification for the use of the higher yields is **[provided in writing to]** **approved by** the Commission or delegated conservation district. **The amendment shall be submitted as required under [§§ 83.361—] § 83.371.**

[(2) For] (d) When determining expected crop yields for **[future] plan [updates and]** amendments, expected crop yields shall be based on documented yield levels achieved for the operation. Expected crop yields higher than historically achieved may be used if ~~{the operator provides}~~ sufficient justification ~~{in writing} to~~ **IS APPROVED BY the Commission or delegated conservation district** for the use of the higher yields ~~[to the Commission or delegated conservation district]~~.

(e) When developing the initial plan, soil tests shall be [required] CONDUCTED for each crop management unit on the operation, to determine the level of phosphorus (as P), potassium (as K), and soil pH, as follows:

(1) THE SOIL TEST PROCEDURES USED SHALL PROVIDE ACCURATE TEST RESULTS. {Use those} THE procedures recommended by {Penn State} THE PENNSYLVANIA STATE UNIVERSITY and published in *Recommended Soil Testing Procedures for the Northeastern United States*, Bulletin #493, published by the University of Delaware, MAY BE USED TO MEET THIS REQUIREMENT {, or other Commission-approved procedures}. OTHER PROCEDURES MUST BE APPROVED BY THE COMMISSION.

(2) Soil tests conducted within the previous 3 years prior to submitting the initial plan are acceptable.

(3) THE PLAN SHALL INCLUDE AN APPENDIX CONTAINING A SUMMARY OF THE RESULTS OF THE SOIL TEST ANALYSES FOR EACH CROP MANAGEMENT UNIT SHOWING THE FOLLOWING:

(I) SOIL TEST LEVELS FOR PHOSPHORUS AND POTASSIUM AS REPORTED BY THE LABORATORY.

(II) SOIL TEST LEVELS FOR PHOSPHORUS (AS P) IN PARTS-PER-MILLION (PPM) AND POTASSIUM (AS K) IN PPM, AFTER CONVERSION FROM THE TEST RESULTS FROM THE LABORATORY, AS NEEDED.

(III) SOIL TEST LEVELS FOR PH.

(IV) THE DATE OF THE SOIL TESTS AND THE NAME OF THE LAB PERFORMING THE TESTS.

(4) ~~The plan shall include soil test results for phosphorus (as P) in parts per million (ppm) as a component of the Phosphorus Index analysis for each crop management unit. Other soil test results are not required to be submitted with the plan, but shall be kept on record at the operation.~~ After the approval of the initial plan, soil tests are required for each crop management unit at least every 3 years from the date of the last test.

[(c)] (f) BASED ON THE SOIL TESTS IN (E), ~~The~~ THE plan shall include [a determination of] recommendations ~~based on current soil tests~~ for the amount of [nutrients] nitrogen (as total N), ~~and~~ phosphorus (as P₂O₅) AND POTASSIUM (AS K₂O) necessary for realistic expected crop yields.

[(d)] (g) ~~The [Pennsylvania Agronomy Guide or Manure Management Manual may] procedures in the Soil Test Recommendations Handbook For Agronomic Crops, Penn State Agricultural Analytical Services Laboratory, shall be used when necessary to [assist in determining] determine or adjust the recommended amount of nutrients necessary [for achieving] to achieve realistic expected crop yields. Other methodologies for this~~

~~adjustment may be used as approved by the Commission.~~ **IF NECESSARY BASED ON THE TYPE OF CROPS PLANNED, THE RECOMMENDATIONS FROM THE INITIAL SOIL TEST SHALL BE ADJUSTED TO DETERMINE THE APPROPRIATE AMOUNT OF NUTRIENTS NECESSARY TO ACHIVE REALISTIC EXPECTED CROP YIELDS. THIS ADJUSTMENT MAY BE SATISFIED BY USING THE METHODOLOGIES IN THE SOIL TEST RECOMMENDATIONS HANDBOOK FOR AGRONOMIC CROPS PUBLISHED BY THE PENNSYLVANIA STATE UNIVERSITY AGRICULTURAL ANALYTICAL SERVICES LABORATORY. OTHER METHODOLOGIES FOR THIS ADJUSTMENT MUST BE APPROVED BY THE COMMISSION.**

§ 83.293. Determination of nutrient application rates.

(a) **APPLICATION RATES SHALL BE DEVELOPED TO PROTECT SURFACE WATER AND GROUNDWATER USING BMPS AS DESCRIBED IN THE PLAN. THE MANURE APPLICATION RATE SHALL BE THE LESSER OF THE FOLLOWING:**

(1) **A RATE EQUAL TO OR LESS THAN THE BALANCED MANURE APPLICATION RATE BASED ON NITROGEN AS DETERMINED PURSUANT TO (B).**
OR

(2) **THE RATE AS DETERMINED PURSUANT TO (C).**

(B) [Nitrogen] NITROGEN. ~~[Manure and other nutrient sources shall be applied]~~ [only in the amounts] ~~[so as not to]~~ LAND APPLICATION OF MANURE AND OTHER NUTRIENT SOURCES ON CROPLAND, HAYLAND AND PASTURES SHALL BE MANAGED TO MINIMIZE THE AFFECTS OF NITROGEN LOSSES FROM FIELDS.

THE RATE SHALL NOT exceed the amount of nitrogen necessary to achieve realistic expected crop yields or ~~{at a rate} {not exceeding} [what]~~ the amount of nitrogen the crop will utilize for an individual crop year.

(1) THE BALANCED MANURE APPLICATION RATE BASED ON NITROGEN SHALL BE DETERMINED BY FIRST SUBTRACTING THE AMOUNT OF AVAILABLE RESIDUAL NITROGEN AND ANY APPLIED NITROGEN, SUCH AS NITROGEN APPLIED IN STARTER FERTILIZER, FROM THE AMOUNT OF NITROGEN NECESSARY FOR REALISTIC EXPECTED CROP YIELDS, AND THEN DIVIDING THAT AMOUNT BY THE AVAILABLE NITROGEN CONTENT OF THE MANURE AS DETERMINED UNDER § 83.291 (RELATING TO DETERMINATION OF AVAILABLE NUTRIENTS).

(2) THE CALCULATIONS AND VARIABLES USED FOR DETERMINING THE BALANCED MANURE APPLICATION RATES BASED ON NITROGEN SHALL BE RECORDED IN THE PLAN.

~~{(b) In addition to the nitrogen limitations described in subsection (a), applications of manure and other nutrient sources shall also be limited as determined by the Phosphorus Index, as follows:~~

~~(i) Apply the Phosphorus Index on all areas of the agricultural operation where nutrients will be applied.~~

~~(ii) Implement the resulting management actions as provided through the Phosphorus Index on each crop management unit.]~~

~~(c) [The planned manure application rate shall be recorded in the plan. The planned manure application rate] [may] [shall be the lesser of any rate equal to or less than the balanced manure application rate based on nitrogen, or the rate as determined by the Phosphorus Index.~~

~~(i) The balanced manure application rate based on nitrogen shall be determined by first subtracting the amount of available residual nitrogen and any other applied nitrogen, such as nitrogen applied in the starter fertilizer, from the amount of nitrogen necessary for realistic expected crop yields, and then dividing this by the available nitrogen content of the manure as determined by standard methods under § 83.291 (relating to determination of available nutrients).~~

~~(ii) The calculation or variables used for determining the balanced rates shall be recorded in the plan.~~

PHOSPHORUS. LAND APPLICATION OF MANURE AND OTHER NUTRIENT SOURCES ON CROPLAND, HAYLAND AND PASTURES SHALL BE MANAGED TO MINIMIZE THE AFFECTS OF PHOSPHORUS LOSSES FROM FIELDS. METHODS FOR DETERMINING AND MANAGING THE RISK OF PHOSPHORUS LOSS, AND RELATED WATER QUALITY IMPACTS, SHALL COMPLY WITH THE FOLLOWING:

(1) DETERMINE THE RISK OF PHOSPHORUS LOSS AND RELATED WATER QUALITY IMPACTS BASED ON RELEVANT FACTORS INCLUDING THE FOLLOWING:

(I) SOIL PHOSPHORUS LEVELS.

(II) THE METHOD, RATE AND TIMING OF PHOSPHORUS APPLICATION.

(III) RUNOFF AND SOIL LOSS POTENTIAL FOR THE APPLICATION AREA.

(IV) DISTANCE TO SURFACE WATER.

(V) THE TYPE OF PHOSPHORUS SOURCE BEING USED.

(2) BASED ON THE RISKS AND IMPACTS DETERMINED AS DESCRIBED IN (1), ESTABLISH APPROPRIATE BEST MANAGEMENT PRACTICES SUCH AS METHODS, RATES AND TIMING OF APPLICATION DESIGNED TO MINIMIZE THE AFFECTS OF PHOSPHORUS LOSSES FROM FIELDS. THESE MAY BE ADDRESSED BY A RANGE OF OPTIONS, INCLUDING:

(I) MANURE APPLICATION IS LIMITED TO NITROGEN REQUIREMENTS OF THE CROP, IF THE APPLICATION OF PHOSPHORUS TO THE SOIL IS NOT EXPECTED TO POSE AN IMMEDIATE RISK OF IMPACTS TO SURFACE WATER.

(II) PHOSPHORUS APPLICATION IS LIMITED TO THE LEVEL OF PHOSPHORUS REMOVAL FROM THE SOIL BY THE CROP, IF THE APPLICATION OF PHOSPHORUS TO THE SOIL WOULD BE EXPECTED TO POSE AN IMMEDIATE RISK OF IMPACTS TO A SURFACE WATER UNLESS THE RISK IS MANAGED BY LIMITING THE APPLICATION BASED ON PHOSPHORUS.

(III) PHOSPHORUS APPLICATION IS COMPLETELY RESTRICTED, IF THE APPLICATION OF PHOSPHORUS TO THE SOIL WOULD BE EXPECTED TO

**POSE AN IMMEDIATE RISK OF IMPACTS TO A SURFACE WATER WHICH
CANNOT BE MANAGED BY LIMITING THE NUTRIENTS BASED ON
PHOSPHORUS.**

**(3) FOR CAOS AND VAOS EXISTING ON OCTOBER 1, 2006, THE
COMMISSION SHALL ALLOW A PHASE-IN PERIOD UNTIL DECEMBER 31, 2010,
TO FULLY MEET THE REQUIREMENTS OF (2).**

**(I) THE PHASE-IN SHALL ALLOW FLEXIBILITY IN CONTROLLING
PHOSPHORUS LOSS, AS LONG AS THE PHOSPHORUS APPLICATION RATES ON
ANY CROP MANAGEMENT UNIT WHERE THE PHASE-IN IS USED DO NOT
EXCEED THE LEVELS OF PHOSPHORUS REMOVAL FROM THE SOIL BY THE
CROPS.**

**(II) THE PHASE-IN IN THIS PARAGRAPH SHALL ALSO APPLY TO
OPERATIONS THAT IMPORT MANURE FROM NMP OPERATIONS EXISTING ON
OCTOBER 1, 2006.**

**(4) THE PHASE-IN PERIOD IN (3) SHALL NOT APPLY TO THE
FOLLOWING:**

(I) AN OPERATION THAT COMMENCES AFTER OCTOBER 1, 2006.

**(II) AN OPERATION THAT BECOMES DEFINED AS A CAO, DUE TO AN
INCREASE IN ANIMAL NUMBERS, AFTER OCTOBER 1, 2006.**

**(III) AN OPERATION THAT INCREASES THE TOTAL AEUS ON THE
OPERATION BY 20% OR MORE AFTER OCTOBER 1, 2006.**

**(IV) AN OPERATION THAT ADDS A NEW ANIMAL TYPE AFTER
OCTOBER 1, 2006.**

**(V) FIELDS WHERE THE NEAREST DOWNGRADIENT STREAM
SEGMENT WHICH RECEIVES RUNOFF FROM THE FIELDS IS CLASSIFIED AS A
SPECIAL PROTECTION WATER UNDER CHAPTER 93 (RELATING TO WATER
QUALITY STANDARDS).**

**(5) THE CRITERIA AND PROCEDURES IN THE CURRENT PHOSPHORUS
APPLICATION GUIDANCE ISSUED BY THE COMMISSION MAY BE USED TO
COMPLY WITH (1) – (4), INCLUDING THE USE OF A PHOSPHORUS INDEX
CONTAINED IN THE GUIDANCE.**

**(6) IF THE CRITERIA AND PROCEDURES IN THE PHOSPHORUS
APPLICATION GUIDANCE ISSUED BY THE COMMISSION ARE NOT FOLLOWED,
AN ALTERNATIVE METHOD OF MEETING (1) – (4) MUST BE APPROVED BY THE
COMMISSION.**

**(7) FOR PASTURES WHICH REQUIRE COMPLETE RESTRICTIONS ON
PHOSPHORUS APPLICATION AS DETERMINED UNDER THIS SECTION, THE
PROVISIONS OF §83.294(J) APPLY.**

[(c)] (d) GENERAL NUTRIENT CALCULATION. The plan shall include calculations for each crop management unit indicating the difference between the [recommended nitrogen] amount of nitrogen ~~and~~, phosphorus AND POTASSIUM necessary for realistic expected crop yields under § 83.292 (relating to determination of nutrients needed for crop production) and the nitrogen ~~and~~, phosphorus AND POTASSIUM applied through all

planned nutrient sources, including, but not limited to, manure, ~~[sludge]~~ biosolids, starter fertilizer and other fertilizers, and residual nitrogen. [A deficit may be made up with supplemental nitrogen applications.] A nitrogen availability test may ~~{also}~~ be used to determine supplemental nitrogen needs.

§ 83.294. Nutrient application procedures.

[The plan shall include nutrient application procedures that meet the following criteria:

(1) (a) **GENERAL**. Nutrients shall be ~~{uniformly}~~ applied to fields during times and conditions that will hold the nutrients in place for crop growth, and protect surface water and groundwater ~~{in accordance with the approved manure management practices as described in the *Manure Management Manual*}~~ **USING BMPS AS DESCRIBED IN THE PLAN.**

(2) (b) **TIMING**. Intended target spreading periods for the application of manure shall be included in the plan.

(3) Application (c) **EQUIPMENT CAPABILITIES**. Manure application rates and procedures shall be consistent with the capabilities, including capacity and calibration range, of available application equipment.

(1) For existing operations ~~{and any operation using a commercial manure applicator}~~ **USING THEIR OWN APPLICATION EQUIPMENT, the plan shall include {the capacity and practical} A STATEMENT INDICATING THAT THE EXISTING EQUIPMENT HAS BEEN CALIBRATED TO ENSURE IMPLEMENTATION OF THE application rates {, based on calibration of the existing equipment.} DESCRIBED IN THE PLAN, AND THAT THE EQUIPMENT HAS THE CAPACITY TO MEET THOSE**

APPLICATION RATES. THE SUPPORTING DOCUMENTATION FOR THIS STATEMENT SHALL BE AVAILABLE AT THE OPERATION FOR INSPECTION BY THE COUNTY CONSERVATION DISTRICT AND THE COMMISSION.

(2) For proposed operations ~~[not using a commercial custom manure applicator], or where [this calibration]~~ IT is not feasible TO CALIBRATE THE EQUIPMENT OR VERIFY ITS CAPACITY at planning time, the operator shall perform this application equipment calibration ~~[analysis]~~ AND CAPABILITY VERIFICATION prior to the first application of manure. ~~[, or within 1 year of the facility beginning operation, whichever is sooner, and this information shall be included in any necessary amendments to the plan.]~~

THE STATEMENT DESCRIBED IN (1) SHALL BE INCLUDED IN ANY NECESSARY AMENDMENTS TO THE PLAN. THE SUPPORTING DOCUMENTATION OF THIS STATEMENT SHALL BE AVAILABLE AT THE OPERATION FOR INSPECTION BY THE COMMISSION AND DELEGATED COUNTY CONSERVATION DISTRICT.

(3) IF A COMMERCIAL MANURE HAULER IS USED, THE HAULER SHALL BE RESPONSIBLE FOR ENSURING THAT THE EQUIPMENT IS CAPABLE OF COMPLYING WITH THE APPLICATION RATE CONTAINED IN THE PLAN.

[(4)] (d) IRRIGATION SYSTEMS. If manure will be applied using an irrigation system, the following applies:

(1) Application rates for irrigated liquid manure [irrigation] shall be based on the lesser of [either the nutrient plan] the following:

(i) THE planned application rates in gallons per acre determined in accordance with § 83.293[(a)and (b)] ~~[(c)]~~ (A) (relating to determination of nutrient application rates)], or the rates].

(ii) the combination of the following

(A) the liquid application rate in inches per hour determined to be within infiltration capabilities of the soil [such as those contained in the NRCS *Pennsylvania Irrigation Guide* or the Mid West Plan Service, *Livestock Waste Facilities Handbook*].

(B) the liquid application depth in inches not to exceed the soil's water holding capacity within the root zone or any restricting feature at the time of application.

(2) The ALLOWABLE liquid application rate and application depth shall be BASED ON APPROPRIATE FACTORS SUCH AS AVAILABLE WATER HOLDING CAPACITY OF THE SOIL, DEPTH OF THE ROOT ZONE, DEPTH TO A SHALLOW IMPERVIOUS SOIL LAYER, SOIL INFILTRATION RATE, SOIL TEXTURE AND DRAINAGE, VEGETATION AND GROUND SLOPE. APPLICATION BMPS THAT ARE consistent with the current versions of Penn State Fact Sheets F254 through F257, as applicable to the type of irrigation system planned to be used on the operation, and the NRAES-89 Liquid Manure Application System Design Manual, MAY BE USED TO COMPLY WITH THIS SUBSECTION. OTHER BMPS MUST BE APPROVED BY THE COMMISSION.

(3) THE PLAN SHALL INCLUDE THE COMPUTATIONS FOR THE APPLICATION RATE (IN INCHES PER HOUR) AND APPLICATION DEPTH (IN TOTAL INCHES) OF THE VARIOUS APPLICATION RATES, AND THESE

APPLICATIONS SHALL NOT EXCEED EITHER THE INFILTRATION RATE OR THE WATER HOLDING CAPACITY OF THE APPLICATION SITES, AS LISTED IN THE PLAN.

(e) MANURE APPLICATION AT RATES GREATER THAN 9,000 GALLONS PER ACRE.

If liquid or semi-solid manure is planned to be applied at rates greater than 9,000 gallons per acre at any one application time, the rates and amounts shall be limited based on the infiltration rate and water holding capacity of the application areas as described in subsection ~~{(e)}~~ (D). In these instances the plan shall include the computations for the ~~{infiltration}~~ APPLICATION rates ~~{and water holding capacity of}~~ IN INCHES PER HOUR, AND IN TOTAL INCHES, FOR the various application areas, and these applications shall not be allowed to exceed either the ~~{determined}~~ infiltration rate or the water holding capacity of the application sites, AS LISTED IN THE PLAN.

[(5)] (f) SETBACKS AND BUFFERS. Manure ~~{may}~~ SHALL not be MECHANICALLY applied in the following situations:

(1) WITHIN 100 FEET OF THE TOP OF THE BANK OF A PERENNIAL OR INTERMITTENT STREAM WITH A DEFINED BED AND BANK, A LAKE OR A POND, UNLESS A PERMANENT VEGETATED BUFFER OF NO LESS THAN 35 FEET IN WIDTH IS USED, TO PREVENT MANURE RUNOFF INTO THE STREAM, LAKE OR POND.

~~{(i)}~~ (2) Within 100 feet of an EXISTING open sinkhole ~~{where surface water flow is toward the sinkhole, unless the manure is mechanically incorporated within 24 hours of~~

~~application}~~ **UNLESS A PERMANENT VEGETATED BUFFER OF NO LESS THAN 35 FEET IN WIDTH IS USED.**

~~{(ii)}~~ **(3) Within 100 feet of active private drinking water sources such as wells and springs[, where surface water flow is toward the water source, unless the manure is mechanically incorporated within 24 hours of application].**

~~{(iii)}~~ **(4) Within 100 feet of an inactive open drinking water well, where surface water flow is toward the water well, unless the manure is mechanically incorporated within 24 hours of application.**

[(iii)] ~~{(iv)}~~ (4) Within 100 feet of an active public drinking water source, unless other State or Federal laws or regulations require a greater isolation distance.

[(iv)] ~~{(v)}~~ Within concentrated water flow areas in which vegetation is maintained, such as ditches, waterways, gullies and swales, during times when soil is frozen, snow covered or saturated.

[(v)] ~~{(vi)}~~ Within concentrated water flow areas in which vegetation is not maintained, such as intermittent streams, gullies and ditches.

[(vi)] ~~{(vii)}~~ Within 100 feet of streams, springs, lakes, ponds, intakes to agricultural drainage systems (such as in-field catch basins, and pipe outlet terraces), or other types of surface water conveyance,] [where] ~~{if surface water flow is toward the identified area,}~~ [when] ~~{and if soil is frozen, snow covered or saturated.}~~

[(vii)] ~~{(viii)}~~ Within 200 feet of streams, springs, lakes, ponds, intakes to agricultural drainage systems (such as in-field catch basins, and pipe outlet terraces), or other types of surface water conveyance,] [where] ~~{if surface water flow is toward the}~~ [identified area

and where] ~~[surface water or conveyance, if the slope is greater than 8% as measured within the 200 feet,] [during times when] [and if the soil is frozen, snow covered or saturated.]~~

~~[(ix)]~~ **(5) On crop management units having less than 25% plant cover or crop residue at the time of manure application, unless:**

~~[(A.)~~ **(I) For fall applications, the crop management unit is planted to a cover crop in time to allow for appropriate growth** ~~[(according to standards contained in the] **TO CONTROL RUNOFF UNTIL THE NEXT GROWING SEASON, OR THE MANURE IS INJECTED OR MECHANICALLY INCORPORATED WITHIN FIVE DAYS USING MINIMAL SOIL DISTURBANCE TECHNIQUES CONSISTENT WITH NO-TILL FARMING PRACTICES. THE *Pennsylvania Technical Guide*]**~~ **CONTAINS PRACTICES WHICH MAY BE USED TO SATISFY THIS REQUIREMENT. OTHER PRACTICES MUST BE APPROVED BY THE COMMISSION. THE PRACTICES MUST BE CONSISTENT WITH THOSE IN THE AGRICULTURAL EROSION AND SEDIMENT CONTROL PLAN.**

~~[(B.)~~ **(II) For applications in the spring or summer, the crop management unit is planted to a crop that growing season.**

~~[(C.)~~ **(III) For winter applications, the crop management unit is addressed under subsection (g).**

~~[(D.)~~ **Other practices are implemented to protect surface water and groundwater, which are approved by the Commission and are consistent with the operator's Erosion and Sediment Control Plan.]**

**[(6)] (g) WINTER APPLICATION. ~~[(H)]~~ FOR winter [spreading] application of manure, ~~[(I)]~~
[anticipated] ~~[(J)]~~ THE FOLLOWING APPLY:**

**(1) the application procedures [for the winter spreading of manure] shall be described
in the plan.**

**(2) ~~[(K)]~~ [The procedures described in the plan shall be consistent with those contained in
the *Manure Management Manual*.] [If procedures other than those in the *Manure
Management Manual* are to be used, approval shall be obtained from the Department or a
delegated conservation district.] The plan shall list THE FOLLOWING:**

**(I) all crop management units where winter application is ~~[(L)]~~
PLANNED or restricted.**

**(II) THE APPLICATION PROCEDURES THAT WILL BE UTILIZED AT
THOSE CROP MANAGEMENT UNITS.**

**(III) THE FIELD CONDITIONS THAT MUST EXIST FOR WINTER
APPLICATION.**

**~~[(M)]~~ [planned ground cover on the application sites, and what procedures shall be utilized for
each crop management unit to protect the quality of surface water and groundwater.]**

**(3) SETBACKS LISTED IN § 83.294(F) SHALL BE IMPLEMENTED. IN
ADDITION, DURING WINTER MANURE SHALL NOT BE MECHANICALLY
APPLIED IN THE FOLLOWING SITUATIONS:**

**(I) WITHIN 100 FEET OF AN ABOVE-GROUND INLET TO AN
AGRICULTURAL DRAINAGE SYSTEM, IF SURFACE FLOW IS TOWARD THE
ABOVE-GROUND INLET.**

(II) WITHIN 100 FEET OF A WETLAND THAT IS IDENTIFIED ON THE NATIONAL WETLANDS INVENTORY MAPS, IF THE FOLLOWING ARE MET:

A. THE WETLAND IS WITHIN THE 100-YEAR FLOODPLAIN OF AN EXCEPTIONAL VALUE STREAM SEGMENT, AND

B. SURFACE FLOW IS TOWARD THE WETLAND.

(4) FIELDS WHERE MANURE WILL BE APPLIED IN WINTER SHALL HAVE AT LEAST 25% RESIDUE, OR AN ESTABLISHED COVER CROP. THE BMPS CONTAINED IN THE PENNSYLVANIA TECHNICAL GUIDE MAY BE USED TO SATISFY THIS REQUIREMENT. OTHER PRACTICES MUST BE APPROVED BY THE COMMISSION.

(h) IN-FIELD STACKING. In-field stacking of dry manure as a part of manure application is permissible ~~if the manure is~~ ON AN NMP OPERATION, AND ANY IMPORTING LANDS GOVERNED BY § 83.301, IF THE FOLLOWING REQUIREMENTS ARE MET:

(1) THE MANURE SHALL BE land applied on the crop management unit WITHIN 120 DAYS OF STACKING, OR prior to the beginning of the next growing season, WHICHEVER IS SOONER.

(2) THE STACKS SHALL BE CONSTRUCTED USING APPROPRIATE BMPS SUCH AS PLACEMENT ON APPROPRIATE SOILS, PROPER CONSIDERATION OF SLOPES WHERE STACKS WILL BE PLACED, SHAPING THAT MINIMIZES ABSORPTION BY RAINFALL, PROPER CONSIDERATION OF THE SIZE OF THE STACK, USE OF SETBACKS AND ROTATION OF STACK LOCATIONS.

~~{(2)}~~ (3) If stacking occurs for a longer period ~~[- the stack area shall meet standards for a waste stacking and handling pad. All in-field stacking areas shall be located, and stacks shall be shaped, to minimize water absorption and impacts from runoff in accordance with the criteria]~~ THAN THAT DESCRIBED IN (1), THE STACKS SHALL EITHER BE COVERED TO KEEP RAINWATER FROM ENTERING THE STACKS, OR A WASTE STACKING AND HANDLING PAD SHALL BE USED. THE BMPS CONTAINED IN THE *Pennsylvania Technical Guide* MAY BE USED TO MEET THIS REQUIREMENT. OTHER BMPS MUST BE approved by the Commission.

~~{(3)}~~ (4) LOCATIONS FOR IN-FIELD STACKING OF DRY MANURE SHALL BE SHOWN ON THE FARM MAPS AND THE NUTRIENT BALANCE SHEET MAPS REQUIRED BY THIS SUBCHAPTER.

(i) COMMERCIAL MANURE HAULERS. If a commercial manure ~~{applicator}~~ HAULER will be used for the application of the manure on the agricultural operation, the commercial manure ~~{applicator}~~ HAULER shall meet the requirements of ~~{§ 83.301(a)(5) (relating to excess manure utilization plans for CAOs)}~~ ACT 49.

(j) PASTURES REQUIRING PHOSPHORUS RESTRICTIONS. IF A PASTURE HAS BEEN DETERMINED TO REQUIRE TOTAL RESTRICTION OF PHOSPHORUS APPLICATION UNDER § 83.293(C), THE RISK OF PHOSPHORUS LOSS SHALL BE ADDRESSED BY THE FOLLOWING BMPS IN LIEU OF TOTAL RESTRICTION OF PHOSPHORUS APPLICATION:

(1) NO GRAZING SHALL BE CONDUCTED WITHIN 50 FEET OF A PERENNIAL OR INTERMITTENT STREAM, A LAKE OR A POND.

(2) A PRESCRIBED GRAZING SYSTEM SHALL BE USED TO MAINTAIN AN ESTABLISHED STAND OF FORAGE ON THE PASTURE AREA.

(3) THE STOCKING RATE SHALL BE LIMITED TO ENSURE THAT THE LEVEL OF PHOSPHORUS DEPOSITED BY THE ANIMALS DOES NOT EXCEED THE LEVEL OF PHOSPHORUS REMOVAL FROM THE SOIL BY VEGETATION IN THE PASTURE.

(4) BMPS CONTAINED IN THE PENNSYLVANIA TECHNICAL GUIDE MAY BE USED TO MEET THE REQUIREMENTS IN (1) – (2). OTHER BMPS MUST BE APPROVED BY THE COMMISSION.

ALTERNATIVE USES FOR EXCESS MANURE ~~{FOR CAO PLANS}~~

§ 83.301. Excess manure utilization plans ~~{for CAOs}~~.

(a) GENERAL. [When] If manure will be exported [to] for use off the {CAO} NMP OPERATION at known [landowners or operators] agricultural operations for agricultural land application, the [plan shall list] following shall apply:

(1) [The name and general location of the proposed importing agricultural operation.] The plan shall include signed agreements, on a form acceptable to the Commission, between the {CAO} NMP OPERATION and each importing operator agreeing to accept the manure from the exporting operation. If the importing operator will be applying manure on lands rented or leased to that importing operator, the agreement shall state that the importing operator has the authority to apply manure on the leased or rented lands.

(2) [The estimated number of acres available for spreading manure at each importing agricultural operation.] The importing operator is responsible for the proper handling and application of the imported manure accepted from an exporter, in accordance with {the relevant nutrient balance sheet or the importer's nutrient management plan} (B).

(3) [The estimated amount of manure to be exported annually to known landowners or operators for agricultural land application.] {A CAO} AN NMP OPERATION exporting manure shall also be responsible for the PROPER handling and application of the EXPORTED manure if the {CAO} NMP OPERATION, or an employee or contractor of the {CAO} OPERATION, applies manure at the importing operation.

(4) [The estimated amount of manure that could be exported to each agricultural operation.] The plan shall ~~include copies of~~ DEMONSTRATE HOW THE EXPORTED MANURE WILL BE PROPERLY MANAGED. THIS SHALL BE DONE BY USE OF EITHER nutrient balance sheets ~~{applicable to each crop management unit where the exported manure will be applied}~~ OR APPROVED NUTRIENT MANAGEMENT PLANS, AND SIGNED AGREEMENTS WITH IMPORTERS, PURSUANT TO THIS SUBCHAPTER. ~~{These nutrient balance sheets for importing operations shall include a map identifying the areas where the imported manure will be applied and applicable manure application setbacks relevant to the site, including those identified in § 83.294 (relating to nutrient application procedures). Nutrient management plans implemented at the importing operations may be used to meet this requirement if they are attached to the plan.}~~

(B) RESTRICTIONS ON LAND APPLICATION OF EXPORTED MANURE. THE LAND APPLICATION OF MANURE EXPORTED FROM AN NMP OPERATION SHALL ADDRESS THE RISK AND IMPACTS OF NITROGEN AND PHOSPHORUS LOSS TO WATERS.

(1) NITROGEN SHALL BE ADDRESSED PURSUANT TO § 83.293(B).

(2) PHOSPHORUS SHALL BE ADDRESSED BY ONE OF THE FOLLOWING, AS SELECTED BY THE OPERATOR:

(I) THE RATE AT WHICH PHOSPHORUS IS APPLIED SHALL NOT EXCEED THE LEVEL OF PHOSPHORUS REMOVAL FROM THE SOIL BY THE PLANNED CROP AS DETERMINED UNDER § 83.293(C), AND THE MANURE SHALL NOT BE APPLIED WITHIN 150 FEET FROM THE TOP OF THE BANK OF AN INTERMITTENT OR PERENNIAL STREAM, A LAKE OR A POND.

(II) FOR CROP MANAGEMENT UNITS WITH DOCUMENTED SOIL TEST LEVELS OF PHOSPHORUS LESS THAN 200 PPM, MANURE SHALL NOT BE APPLIED WITHIN 150 FEET FROM THE TOP OF THE BANK OF AN INTERMITTENT OR PERENNIAL STREAM, A LAKE OR A POND.

(III) MANURE APPLICATION SHALL BE DETERMINED IN ACCORDANCE WITH § 83.293(C).

(IV) MANURE APPLICATION SHALL FOLLOW A NUTRIENT MANAGEMENT PLAN APPROVED BY THE COMMISSION OR DELEGATED CONSERVATION DISTRICT UNDER THIS SUBCHAPTER.

(3) THE SETBACKS IN § 83.294 SHALL APPLY TO LAND APPLICATION OF MANURE EXPORTED FROM AN NMP OPERATION.

(C) NUTRIENT BALANCE SHEETS. THE METHOD, RATE AND TIMING FOR ANY LAND APPLICATION PURSUANT TO (B)(2)(I) – (III) SHALL BE DESCRIBED IN A NUTRIENT BALANCE SHEET. NUTRIENT BALANCE SHEETS SHALL INCLUDE THE FOLLOWING:

- (1) A MAP WHICH IDENTIFIES THE CROP MANAGEMENT UNITS WHERE THE MANURE IS PLANNED TO BE APPLIED, LOCATION FOR FIELD STACKING AND APPLICABLE SETBACKS UNDER §83.294 AND THIS SECTION.**
- (2) DOCUMENTATION OF THE SELECTED METHOD USED TO ADDRESS NITROGEN AND PHOSPHORUS ON THE CROP MANAGEMENT UNITS RECEIVING THE IMPORTED MANURE. ACCEPTABLE METHODS ARE THOSE DESCRIBED IN THIS SECTION.**
- (3) IF OPTIONS (B)(2)(I) – (III) ARE USED, THE CALCULATIONS ASSOCIATED WITH DETERMINING THE MANURE APPLICATION RATE APPROPRIATE TO THE SELECTED NITROGEN AND PHOSPHORUS MANAGEMENT OPTION USED.**
- (4) THE DATE WHEN THE NUTRIENT BALANCE SHEET WAS DEVELOPED.**
- (5) THE NAME AND SIGNATURE OF THE CERTIFIED PLANNER OR BROKER THAT DEVELOPED THE NUTRIENT BALANCE SHEET.**

~~{(5)}~~ **(D) [The intended season of the manure transfer] *COMMERCIAL MANURE***

HAULERS. If the ~~{CAO}~~ NMP OPERATION will utilize a commercial manure hauler/~~applicator~~ for the hauling or application of the exported manure, ~~{the plan shall list the name of the commercial hauler/applicator that will be used. Only those haulers/applicators that meet the following qualifications shall be acceptable in the plan:~~

~~(i) Demonstrates knowledge of regulatory requirements related to transport and application of manure, as applicable, through completion of training, testing, experience or other means acceptable to the Commission;~~

~~(ii) Has maintained a record of substantial compliance with regulatory requirements to ensure proper handling and application of manure, including this Subchapter, as determined by the Commission;~~

~~(iii) Agrees to maintain records documenting compliance with this Subchapter;~~

~~(iv) Meets any other requirements determined by the Commission to ensure the proper hauling and application of manure.] ONLY THOSE HAULERS THAT HOLD A VALID AND CURRENT CERTIFICATION UNDER ACT 49 MAY BE USED. THE PLAN SHALL INCLUDE A STATEMENT INDICATING THAT ANY COMMERCIAL MANURE HAULERS USED FOR IMPLEMENTATION OF THE PLAN SHALL HOLD A VALID AND CURRENT CERTIFICATION UNDER ACT 49.~~

~~{(6) The Commission may consider the requirements of subparagraph (5) to be satisfied if the hauler or applicator is certified under either a certification program approved by the Commission or as required by statute.}~~

~~{(b)}~~ (E) [When] **BROKERS**. If manure will be [transported] **exported for use off of the**
~~{CAO}~~ NMP OPERATION through a manure broker, the [plan shall list] **following apply:**

(1) [The broker's name] **The plan shall include a signed agreement, on a form**
acceptable by the Commission, between the ~~{CAO}~~ OPERATION exporting the manure
and each broker agreeing to accept manure from the exporting operation. Brokers are
responsible for the proper handling and storage (where applicable) of the manure accepted
from the ~~{CAO}~~ NMP OPERATION. Only brokers that meet the ~~{following}~~ requirements
OF ACT 49 shall be acceptable in the plan.

~~(i) **Demonstrates knowledge of regulatory requirements related to transport and**~~
~~application of manure through completion of training, testing, experience or other means~~
~~acceptable to the Commission.~~

~~(ii) **Has maintained a record of substantial compliance with regulatory**~~
~~requirements, including this Subchapter, as determined by the Commission.~~

~~(iii) **Agrees to maintain records documenting compliance with this Subchapter.**~~

~~(iv) **Meets any other requirements determined by the Commission to ensure the**~~
~~**proper hauling and application of manure.**~~

~~{(2)} [The estimated amount of manure the exporting agricultural operation will~~
~~transfer through the broker annually.] **~~{The Commission may consider the requirements of~~**~~
~~**subparagraph (1) to be satisfied if the broker is certified under a certification program**~~
~~**approved by the Commission or where required by statute.**~~

~~{(3)} (2) [The intended season for the manure transfer.] **If the manure accepted by a**~~
~~**broker shall be LAND applied to agricultural operations for crop production, the broker**~~

~~shall be responsible for the development of nutrient balance sheets for all crop management units where the manure will be applied. All such nutrient balance sheets shall be retained by the broker and provided by the broker to the importing operation, for retention on the importing operation. Instead of developing nutrient balance sheets, the broker can ensure that an approved nutrient management plan exists for the importing sites.~~ **FOLLOWING:**

(I) ENSURING THAT NUTRIENT BALANCE SHEETS EXIST FOR THE RELEVANT CROP MANAGEMENT UNITS ON THE IMPORTING OPERATIONS, AND THAT THE IMPORTING OPERATOR IS PROVIDED WITH NUTRIENT BALANCE SHEETS WITH RESPECT TO THAT MANURE.

(II) IMPLEMENTING MANURE APPLICATION RATES AND APPLICABLE SETBACKS DESCRIBED IN § 83.294, AND ANY NUTRIENT BALANCE SHEET AND APPROVED NUTRIENT MANAGEMENT PLANS, IF THE BROKER WILL BE RESPONSIBLE FOR LAND APPLICATION OF THE MANURE.

(III) RETAINING COPIES OF ALL NUTRIENT BALANCE SHEETS.

~~(e)~~ **(F) [When] OTHER USES OF MANURE AWAY FROM THE OPERATION. If manure will be [transferred] exported for use off of the ~~[CAO]~~ NMP OPERATION ~~[to a known importer]~~ for use other than agricultural land application, the plan shall include the following information:**

- (1) The name and general location of the importing agricultural operation.
- (2) A brief description of the planned use ~~[of]~~ **for** the imported manure.

(3) The [estimated] amount of manure the operator plans to [transfer] export to the importer annually.

(4) The [intended] planned season for the manure [transfer] export.

(5) A signed agreement between the {CAO} NMP OPERATION and each importing operation agreeing to accept the manure for this use, on a form acceptable ~~by~~ TO the Commission.

~~{(d)}~~ **(G) [Where] OTHER USES OF MANURE ON THE OPERATION. If** manure is to be processed or utilized on the {CAO} NMP OPERATION in a manner other than for agricultural land application, the plan shall briefly describe the planned use of the manure, including the [estimated] amount [expected] planned to be processed or utilized annually.

[(e) Plans for CAOs that come into existence after October 1, 1997, or agricultural operations newly classified as CAOs due to expansion after October 1, 1997, shall provide for the utilization of excess manure by meeting one of the following:

(1) Demonstrate agricultural land is available for application by providing the information as in subsection (a).

(2) Include written agreements with importers or brokers and follow subsection (b) or (c).

(3) If manure is to be used on the agricultural operation for purposes other than for land application, describe how the manure is to be processed or utilized as in subsection (d).

(f) Agricultural operations newly classified as CAOs due to the loss of land available for manure application, may use any of the manure utilization options described in this section.]

~~(g)~~ (H) [When] USE OF OPEN ADVERTISING SYSTEMS. If manure is to be [marketed from an existing agricultural operation] exported for use off of ~~a CAO~~ AN NMP OPERATION existing on October 1, 1997 by using an open advertising system and the importers cannot be identified at planning time, the following apply:

(1) The plan shall describe the proposed marketing scheme, including the estimated amount of manure [expected] planned to be marketed annually using an open advertising system.

(2) An operator may only utilize this method of exporting manure if the operator meets the manure broker requirements ~~of subsection (b)~~ FOR CERTIFICATION UNDER ACT 49.

(3) ~~The~~ WHERE THE MARKETED MANURE WILL BE UTILIZED FOR APPLICATION TO CROP FIELDS, THE exporting ~~CAO~~ OPERATION shall ~~develop~~ ENSURE THAT nutrient balance sheets EXIST for the RELEVANT CROP MANAGEMENT UNITS ON THE importing operations, and ~~provide them to~~ the importing operator IS PROVIDED WITH THE NUTRIENT BALANCE SHEETS. These nutrient balance sheets shall be ~~maintained~~ RETAINED by the exporting ~~CAO~~ OPERATION, the importing operation and any COMMERCIAL manure hauler/~~applicator~~ involved in the exporting of the manure. Nutrient management plans implemented at the importing operations may be used ~~to meet this requirement if they are attached to the plan~~ INSTEAD OF NUTRIENT BALANCE SHEETS.

**(4) THE SETBACKS IN § 83.294 SHALL APPLY TO LAND APPLICATION OF
MANURE EXPORTED FROM AN NMP OPERATION UNDER THIS PARAGRAPH.**

**~~(f)~~ (I) EXCEPTIONS. The plan is not required to provide the specific [plan] EXPORTED
MANURE details as provided in subsections (a) – ~~(e)~~ (H) ~~in these circumstances:~~**

**~~(1) If~~ IF an importer receives less than the following amounts of manure from the
~~CAO~~ NMP OPERATION on an annual basis:**

(1) ~~(10)~~ FIVE tons of solid poultry manure ~~1~~

(2) ~~(50)~~ 25 tons of solid non-poultry manure ~~1, or~~

**(3) ~~(25,000)~~ 10,000 gallons of liquid manure. ~~In these instances, the plan shall list the
name and location of the importing operation, and when and how much manure will be
exported to the importing operation, as well as the proposed usage of the imported manure.~~**

**~~(2) If small quantities of manure, not to exceed 2,000 pounds annually, are expected to
be marketed to individuals. In these circumstances, the plan shall describe the total amount
of manure planned to be marketed in this manner, and the intended use of the manure.~~**

~~(g) The land application of manure exported from a CAO shall be restricted as follows:~~

**~~(1) The exported manure shall not be applied to land within 150 feet of surface
waters, unless otherwise allowed under an approved nutrient management plan meeting
the appropriate planning criteria established under this Subchapter.~~**

**~~(2) Land application of all exported manure shall also comply with all other
applicable manure application setbacks under § 83.294 (relating to nutrient application
procedures).~~**

MANURE MANAGEMENT ~~{FOR CAO PLANS}~~

§ 83.311. Manure management

(a) **REVIEW EXISTING PRACTICES.** In the preparation of a plan, the nutrient management specialist [, or specialist in conjunction with other individuals with nutrient runoff control expertise such as NRCS or conservation district personnel,] shall perform a site visit to conduct a review of the adequacy of existing manure management practices to prevent surface water or groundwater pollution [under normal climatic conditions for the location] from storm events up to and including a 25-year, 24-hour storm intensity. The specialist may confer with NRCS, conservation district staff or others with expertise with nutrient runoff control. This review shall be documented in the plan ~~[and shall identify]~~ BY IDENTIFICATION OF those conditions and areas where ~~[nutrients directly discharge, or have the potential to directly discharge, into surface water]~~ THERE IS A POTENTIAL FOR STORMWATER COMINGLED WITH MANURE TO DIRECTLY RUNOFF INTO SURFACE WATER as a result of a storm event up to and including a 25-year, 24-hour storm intensity, [due to inadequate manure management practices] WITHOUT SUFFICIENT FILTRATION OR OTHER APPROPRIATE TREATMENT OR HANDLING BMPS, SUCH AS VEGETATED BUFFERS. ~~[For purposes of this review, direct discharges are any flows of stormwater contaminated with manure to surface waters without prior filtration or other treatment, such as grassed filter strips.]~~ Practices to be evaluated in this review include manure handling, MANURE collection, barnyard runoff control[,] and MANURE storage [and spreading] practices. Examples of inadequate manure management practices include the following:

(1) Manure, contaminated water or nutrients leaving manure storage or animal concentration areas, and **DIRECTLY** discharging into surface water or groundwater.

(2) The uncontrolled flow of storm water into, or across, manure storage facilities, **[temporary] EMERGENCY** manure stacking areas **[and] or** animal concentration areas.

(3) Manure storage facilities overflowing or maintained at levels above design full levels.

(4) Manure storage facilities that are sized for less than the projected manure accumulation based on the expected application periods used in the plan.

(5) Leaking or unstable manure storage facilities.

(6) Manure storage facilities which otherwise do not comply with § 91.36 (relating to pollution control and prevention at agricultural operations) [~~the Manure Management Manual and the Pennsylvania Technical Guide~~].

(b) ADDRESS INADEQUATE PRACTICES. The plan shall address any existing inadequate manure management practices as follows:

(1) As part of a plan certification under § 83.261~~(e)~~(8)(relating to general), the nutrient management specialist shall [assure] ensure that the review required under subsection (a) was undertaken in the preparation of the plan.

(2) The plan [will] shall contain [those BMPs that are necessary] a listing of inadequate manure management practices and related conditions and problem areas, and the BMPs planned to correct [identified water contamination sources and] them to protect surface water and groundwater.

~~(e)~~ (3) [During the implementation of the approved plan, the] The BMPs shall be selected, designed, constructed and maintained to meet the ~~specifications contained in the~~

~~Manure Management Manual and the Pennsylvania Technical Guide~~ **REQUIREMENTS**
OF THIS SUBCHAPTER. WHERE THIS SUBCHAPTER DOES NOT SPECIFICALLY
ADDRESS AN INADEQUATE MANURE MANAGEMENT PRACTICE, THE BMPS
CONTAINED IN THE PENNSYLVANIA TECHNICAL GUIDE MAY BE USED TO
COMPLY WITH THIS SECTION. OTHER BMPS MUST BE APPROVED BY THE
COMMISSION.

~~(d)~~ (4) The plan submitted for approval is not required to include BMP designs. During the implementation of the approved plan, the operator is responsible for obtaining the necessary BMP designs **and associated Operation and Maintenance Plans** to implement the BMPs listed in the approved plan. The BMP designs **and associated Operation and Maintenance Plans** shall be kept on record by the operator as a supplement to the plan.

~~(e)~~ (C) **ANIMAL CONCENTRATION AREAS. THE FOLLOWING APPLIES TO**
ANIMAL CONCENTRATION AREAS.

(1) ~~Animal concentration areas~~ **THEY shall be sized, located, implemented, and**
managed USING BEST MANAGEMENT PRACTICES to eliminate the direct discharge of
~~polluted~~ storm water RUNOFF COMINGLED WITH MANURE from these areas to
surface water and groundwater ~~;~~ as described in the *Manure Management Manual and the*
Pennsylvania Technical Guide, including

(2) THEY SHALL MEET THE FOLLOWING REQUIREMENTS WHICH SHALL
BE ADDRESSED IN THE PLAN:

~~[(1)] (I) ~~{The size of animal}~~ ANIMAL concentration areas shall be ~~{minimized}~~~~
SIZED APPROPRIATELY IN ORDER TO MINIMIZE ENVIRONMENTAL IMPACTS
THAT MAY BE ASSOCIATED WITH THE AREAS.

~~[(2)] (II) These areas shall be located AND MANAGED SO as to eliminate the direct~~
discharge of ~~{polluted}~~ storm water RUNOFF COMINGLED WITH MANURE from a
storm event of up to and including a 25-year 24-hour storm intensity, except as allowed in
subparagraph (5).

(3) Accumulated manure on non-vegetated animal concentration areas shall be
collected and land-applied to cropland, or exported from the operation, as described in the
plan.

(4) These areas ~~{will}~~ SHALL be DESIGNED, IMPLEMENTED AND managed so as to
minimize the amount of clean water entering the animal concentration area.

(5) ~~{Polluted storm}~~ STORM water RUNOFF COMINGLED WITH MANURE from
these areas ~~{will be}~~ SHALL BE EITHER ~~{managed and properly applied, stored or}~~
treated OR STORED through an appropriate vegetative ~~{area}~~ or other suitable treatment
OR STORAGE ~~{process}~~ METHOD, which shall meet the requirements of this
Subchapter. BMPS FOR VEGETATED BUFFERS AND OTHER TREATMENT OR
STORAGE METHODS CONTAINED IN ~~{and}~~ the *Pennsylvania Technical Guide* ~~{, in~~
order to eliminate the direct discharge of polluted storm water to surface waters or
groundwater} MAY BE USED TO SATISFY THIS REQUIREMENT. OTHER BMPS
MUST BE APPROVED BY THE COMMISSION.

(6) Animal access to surface water in these areas shall be ~~controlled~~ LIMITED TO PROPERLY INSTALLED STREAM CROSSINGS. BMPS CONTAINED IN THE PENNSYLVANIA TECHNICAL GUIDE MAY BE USED TO MEET THIS REQUIREMENT. OTHER BMPS MUST BE APPROVED BY THE COMMISSION.

[(c)] ~~(d)~~ (D) BEST MANAGEMENT PRACTICES. The following BMPs [may be], as appropriate, shall be used if necessary, and shall be described in the plan, to protect water quality [and to control water in] by controlling storm water in the farmstead, including the manure storage and animal concentration areas:

(1) Manure storage facilities including permanent manure stacking areas. The construction of manure storage facilities is not required unless necessary to protect surface water and groundwater ~~[as part of an integrated nutrient management system].~~ Nutrient management plans that require the construction of a manure storage facility shall describe the planned type, dimensions and capacity of the proposed facility, and the location of the proposed facility shall be identified on a plan map.

(2) [Adequate collection of manure from animal concentration areas for utilization on cropland or for other acceptable uses.] Diversion of clean water from manure storage facilities and animal concentration areas, unless required for proper operation of ~~an integrated nutrient management system~~ THE BMP.

(3) [Diversion of contaminated runoff within animal concentration areas to a storage, lagoon, collection basin, vegetated filter area, or another suitable site or facility]. Treatment or storage of storm water ~~contaminated through contact~~ COMINGLED with manure in the manure storage or animal concentration areas.

(4) **[Diversion or elimination of contaminated water sources unless required for proper operation of the manure management system.]**

(5) ~~{Temporary}~~ **EMERGENCY** manure stacking areas ~~{, if they are}~~ **MUST BE** located outside of concentrated water flow areas and areas where manure application is restricted or prohibited based on § 83.294~~[(5)]~~ ~~{(e)}~~ **(F) – (G)** (relating to nutrient application procedures).

~~[(6)]~~ **(5)** Other appropriate BMPs acceptable to the Commission, **including those described in the ~~{Manure Management Manual and the} Pennsylvania Technical Guide.~~**

~~[(d)]~~ ~~{(g)}~~ **(E)** When ~~{temporary}~~ **EMERGENCY** manure stacking areas may be necessary for the implementation of the plan, the plan shall identify those areas available for the storage of manure due to unforeseen circumstances such as adverse weather conditions. **THE STACKS SHALL BE MANAGED USING APPROPRIATE BMPS SUCH AS PLACEMENT ON APPROPRIATE SOILS, PROPER CONSIDERATION OF SLOPES WHERE STACKS WILL BE PLACED AND SHAPING THAT MINIMIZES ABSORPTION OF RAINFALL. THE OPERATOR SHALL NOTIFY THE COUNTY CONSERVATION DISTRICT AT LEAST 24 HOURS IN ADVANCE OF THE USE OF AN EMERGENCY MANURE STACKING AREA.** Manure shall be removed from ~~{temporary}~~ **EMERGENCY** stacking areas for utilization on cropland or other acceptable uses ~~{as soon as feasible}~~ **WITHIN 60 DAYS, UNLESS EXTENDED BY THE COMMISSION OR A DELEGATED CONSERVATION DISTRICT.**

~~[(e)]~~ ~~{(h)}~~ **(F)** Information contained in other sections of the plan may be used by the specialist when addressing this section.

~~[(f)]~~ ~~[(g)]~~ (G) The siting, design and installation of manure storage facilities shall meet the requirements in § 83.351 (relating to minimum standards for the design, construction, location, operation, maintenance and removal from service of manure storage facilities) ~~[and] , ~~the~~ Manure Management Manual and]. THE BMPS CONTAINED IN the Pennsylvania Technical Guide , as they relate to water quality protection, MAY BE USED TO COMPLY WITH THIS SUBSECTION. OTHER MEASURES MUST BE APPROVED BY THE COMMISSION.~~

~~[(h)]~~ (H) If alternative manure technology practices and equipment are planned to address nutrient management issues related to the operation, the rationale for and expected benefit of the planned alternative practices and equipment shall be described in the plan.

SITE SPECIFIC EMERGENCY RESPONSE PLANS

§ 83.312. Site specific emergency response plans.

~~(a) [CAOs]~~ NMP OPERATIONS shall develop and implement a written site-specific emergency response plan addressing actions to be taken in the event of a discharge, leak or spill of materials containing manure. A copy of the plan shall be kept onsite at the operation. The emergency response plan shall contain information necessary to meet the notification requirements for reporting discharge, leak or spill events which would result in pollution or create a danger of pollution to surface water or groundwater contained in § 91.33 (relating to incidents causing or threatening pollution)

(b) In the case of a discharge, leak or spill of materials containing manure related to the operation, the operator shall implement the emergency response plan developed for the operation. The operator shall comply with all notification and reporting requirements.

(c) The nutrient management plan shall contain a verification from a certified planner that an adequate written site-specific emergency response plan meeting the requirements of this section exists for the {CAO} OPERATION.

(d) ~~It is recommended that the~~ THE operator SHALL provide a copy of the emergency response plan to the local emergency management agency that would assist during a major discharge, leak or spill event.

(e) A BMP-specific contingency plan as required by § 83.351 (relating to the minimum standards for the design, construction, location, operation, maintenance and removal manure storage facilities ~~for CAOs~~) shall be included as an addendum to the emergency response plan.

STORMWATER [RUNOFF] CONTROL ~~{FOR CAO PLANS}~~

§ 83.321. Stormwater [runoff] control

(a) [Field runoff control

1] In the preparation of a NUTRIENT MANAGEMENT plan UNDER THIS SUBCHAPTER, the nutrient management specialist [, or specialist in conjunction with other individuals with nutrient runoff control expertise such as NRCS or conservation district personnel,] shall conduct a review of the adequacy of existing [runoff] stormwater control practices on [fields,] croplands, haylands and pastures included in the plan to prevent

NUTRIENT POLLUTION OF surface WATER and groundwater ~~pollution~~. The **specialist may confer with NRCS, conservation district staff or others with expertise with nutrient runoff control.** ~~This~~ **BASED ON THIS** review, ~~shall be included in~~ the plan ~~and~~ shall identify ~~those~~ critical runoff problem areas ~~where nutrients directly discharge into surface water or groundwater~~.

~~(2)~~ **(b)** The **NUTRIENT MANAGEMENT** plan shall contain a list of specific ~~runoff~~ **stormwater** control BMPs to address those critical runoff problem areas identified in the review required under ~~paragraph (1)~~ **subsection (a)**. This list of ~~runoff~~ **stormwater** control BMPs ~~may~~ **shall** not be in conflict with other relevant plans **developed for the operation,** such as ~~a current conservation~~ **THE AGRICULTURAL EROSION AND SEDIMENT CONTROL** plan, ~~developed for the operation,~~ unless otherwise ~~justified in writing by the planner to~~ **approved by** the Commission or delegated conservation district.

~~(3)~~**(c)** The plan submitted for approval is not required to include BMP designs. During the implementation of the approved plan, the operator is responsible for obtaining the necessary BMP designs **and associated operation and maintenance plans** to implement the BMPs listed in the approved plan, and these BMP designs **and associated operation and maintenance plans** shall be kept on record by the operator as a supplement to the **NUTRIENT MANAGEMENT** plan.

~~(4)~~**(d)** BMPs listed in the plan to address critical runoff problem areas shall be **selected,** designed, installed, operated and maintained ~~in accordance with the practices and standards contained in the Manure Management Manual and the~~ **TO PREVENT NUTRIENT POLLUTION OF SURFACE WATER AND GROUNDWATER. THE BMPS**

CONTAINED IN THE *Pennsylvania Technical Guide* MAY BE USED TO MEET THIS REQUIREMENT. OTHER BMPs MUST BE APPROVED BY THE COMMISSION.

~~{(5) Although an erosion and sedimentation control plan, meeting the requirements of Chapter 102 (relating to erosion and sediment control),} (e) [The plan shall include a verification from the specialist developing the plan, indicating that a current Erosion and Sediment Control Plan, meeting the requirements of Chapter 102 (relating to erosion and sediment control), exists for all plowed or tilled croplands included in the plan. A current conservation plan may be used to meet this requirement, as allowed by Chapter 102.] The Erosion and Sediment Control Plan is not required to be submitted as part of a nutrient management plan] [under the act, meeting]. [Compliance with the requirements of this section will not eliminate the operator's responsibility to comply with Chapter 102 or other relevant State laws or regulations relating to the control of erosion and sedimentation from] [earth moving] [construction activities] [such as agricultural plowing and tilling].~~

~~[6] ~~{(f)}~~ (E) For areas on land rented [land] or leased by the operator that have been identified as critical runoff problem areas which will require the installation of BMPs requiring construction activities, the operator shall do one of the following:~~

- ~~(i) Implement the listed BMP.~~
- ~~(ii) Enter into an agreement with the landowner requiring the landowner to implement the BMP.~~

~~[(b) Animal concentration areas.~~

~~(1) The plan shall address stormwater runoff controls in animal concentration areas in a manner that meets the provisions of § 83.311(a)—(c) (relating to manure management).~~

(2) **Runoff controls in animal concentration areas shall be designed, installed, operated and maintained in accordance with the standards contained in the *Pennsylvania Technical Guide*.**

(3) **The plan submitted for approval is not required to include BMP designs. During the implementation of the approved plan, the operator is responsible for obtaining the necessary BMP designs to implement the BMPs listed in the approved plan, and these BMP designs shall be kept on record by the operator as a supplement to the plan.]**

[IMPLEMENTATION SCHEDULES] IMPLEMENTATION SCHEDULE ~~[FOR CAO PLANS]~~

§ 83.331. Implementation schedule.

A plan ~~for plan amendment~~ shall contain a schedule that identifies when the necessary capital improvements and management changes will be made, consistent with the time frames in § 83.362 (relating to plan implementation).

**RECORDKEEPING AND INFORMATIONAL
REQUIREMENTS ~~[FOR CAOs]~~**

§ 83.341. General recordkeeping requirements.

(A) Unless otherwise specified, records required under this subchapter are not required to be submitted to the Commission or delegated conservation district, but shall be retained by the agricultural operation **[complying with the act,]** for at least 3 years.

(B) RECORDS REQUIRED UNDER THIS SUBCHAPTER SHALL BE MAINTAINED ON FORMS PROVIDED BY THE COMMISSION, UNLESS OTHERWISE ALLOWED BY THE COMMISSION.

§ 83.342. Recordkeeping relating to application of nutrients.

(a) Plans ~~{developed for CAOs}~~ shall [, at a minimum,] be supported by the information required in this section, ~~[and §] § 83.343 and 83.344 (relating to alternative manure utilization recordkeeping; and exported manure information packets).~~

(b) The ~~{operator of a CAO}~~ **NMP OPERATION** shall keep the following accurate records of the land application of nutrients, crop yields and soil tests on the ~~[CAO]~~ **NMP OPERATION**.

(1) Records of soil testing results shall be maintained consistent with § ~~[83.291(e)]~~ **83.292(e)** (relating to determination of ~~[available]~~ nutrients **needed for crop production**). **Soil testing is required once every 3 years for each crop management unit.**

(2) Records of manure testing results and testing of other nutrient sources shall be maintained consistent with ~~[§] § 83.291[(b)(3) and 83.343(f)]~~ (relating to determination of **available nutrients needed for crop production**). **Manure testing is required once every year for each manure group, EXCEPT MANURE GROUPS ASSOCIATED WITH LESS THAN 5 AEUS AND MANURE GROUPS REPRESENTING GRAZING CONSISTENT WITH §83.291(C)(3)(IV) AND (VI).**

(3) Land application of nutrients on ~~{a CAO}~~ **NMP OPERATIONS** shall be documented on an annual basis by recording the following information for each source of nutrients:

(i) The locations and number of acres of nutrient application.

(ii) The **[months] dates** of nutrient application.

(iii) The rate of nutrient application for each **[field or] crop [group] management unit**.

(iv) The number of animals on pasture, the number of days on pasture and the average number of hours per day on pasture.

(4) Approximate annual crop yield levels for each crop **[group] management unit ~~{shall be recorded}~~**.

(5) Annual manure production **[calculated consistent with procedures in § 83.291(b)(2) shall be recorded] figures for each manure group** .

§ 83.343. Alternative manure utilization record-keeping.

(a) Recordkeeping for manure [transfers] exports. The following recordkeeping requirements apply to manure exported off of the {CAO} NMP OPERATION:

(1) A manure **[transfer] export** sheet shall be used for all manure transfers from **{CAOs} THE OPERATION**.

(2) The Commission or delegated conservation district **[shall] will** make copies of the manure **[transfer] export** sheet **forms** available to **{CAOs} THE OPERATION**.

(3) Computer-generated forms other than the manure **[transfer] export** sheet **forms** provided by the Commission may be used if they contain the same information as, and are reasonably similar in format to, the forms provided by the Commission.

(4) Recordkeeping related to the application of exported manure shall comply with the following:

(i) The exporter is responsible for the completion of [section 1 of] the [Manure Transfer Sheet] manure export sheet, providing a copy to the importer and retaining a copy at the exporting operation.

(ii) When the exporter, or person working under the direction of the exporter, such as an employee or a COMMERCIAL manure hauler/~~applicator~~, applies the manure to the land, the exporter is responsible for [completion of section 2 of the Manure Transfer Sheet] maintaining records of the actual application dates, application areas (including the observation of any relevant setback restrictions), application methods, and application rates for the exported manure.

(iii) When the manure is exported through a broker, the exporting ~~CAO~~ OPERATION is not responsible for obtaining records of actual application information for importing operations, unless the exporting operator manages the application of the manure. ~~The~~ IF THE BROKER IS RESPONSIBLE FOR APPLYING THE MANURE, THE broker shall retain records of the application of all manure (including date, areas, methods, and rates applied) and shall provide a copy of these application records to the importing ~~site~~ OPERATION for ~~their~~ ITS records.

(b) *Recordkeeping for alternative manure utilization by means other than manure [transfer] export.* Operators shall keep annual records of the amount and use of manure utilized in any manner other than through manure transfers.

[(c) *Exporting manure.* Those exporters following plans that detail the exporting of manure to known landowners, as in § 83.301(a) (relating to excess manure utilization plans for CAOs), need not submit manure transfer records to the agency approving the plan, but

shall retain these records for review by the appropriate agency personnel in accordance with § 83.341 (relating to general recordkeeping requirements). CAOs exporting manure other than to known landowners are required to, within 1 year of approval of the plan, submit to the agency which approved the plan a copy of the manure transfer sheets or the summary of manure transfers of all manure transfers. Manure transfer records shall be maintained by the exporter for 3 years.

(d) *Summary of manure transfers.* When manure transfer records are required to be submitted to the reviewing authority, the exporter may either submit the manure transfer sheets for all manure transfers or the exporter may summarize the information from these sheets on the annual summary of manure transfers and submit this form only.

(e) *Computer generated forms.* The summary of manure transfer forms will be provided by the Commission. Computer-generated forms other than the summary of manure transfers provided by the Commission may be used if they contain the same information as, and are reasonably similar in format to, the forms provided by the Commission.

(f) *Determination of nutrient content.* During the implementation of the plan, operators of CAOs exporting manure will be required to determine the nutrient content of the manure by using accepted manure sampling and chemical analysis methods as outlined in the *Manure Management Manual* or the *Pennsylvania Agronomy Guide.*]

§ 83.344. Exported manure informational packets.

(a) [When] If manure is exported from ~~{a-CAO}~~ AN NMP OPERATION, the exporter will provide the importer and any relevant manure hauler{/applicators} or brokers with a completed [Manure Transfer Sheet] manure export sheet.

(b) If the manure is to be land applied AT AN IMPORTING OPERATION, the exporter is required, EXCEPT AS PROVIDED IN (C), to provide the following information to the importer ~~{or broker}~~, as supplied by the Commission or its delegated agent:

(1) [A fact sheet allowing for quick estimation of manure application rates.

(2)] The ~~{applicable}~~ RELEVANT sections of the *Manure Management Manual*.

~~[(3)]~~(2) A concise educational publication describing the key concepts of nutrient management.

~~[(4)]~~(3) Additional informational items as supplied by the Commission for this purpose.

(c) IF A BROKER WILL BE RESPONSIBLE FOR APPLYING THE MANURE AT THE OPERATION, THE BROKER SHALL MEET THE REQUIREMENTS OF (B).

(D). The Commission or its delegated agent will provide the materials in subsection (b) for distribution by the exporter. The exporter is only required to provide those items in subsection (b) that have been made available to the exporter by the Commission or its delegated agent.

~~{(d)}~~ (E) The exporter is responsible for providing the informational materials described in subsection (b) only if the importer ~~{-hauler/applicator or broker}~~ OR COMMERCIAL MANURE HAULER does not already have a current copy of the informational materials.

MINIMUM STANDARDS FOR MANURE STORAGE

FACILITIES ~~{ON CAOS}~~

§ 83.351. Minimum standards for the design, construction, location, operation, maintenance and removal from service of manure storage facilities.

(a) The minimum standards contained in this section apply to new manure storage facilities ~~{constructed, and existing manure storage facilities expanded, as part of a plan developed for a CAO}~~ **AND THE EXPANSION OF EXISTING MANURE STORAGE FACILITIES, AS PART OF A PLAN DEVELOPED FOR AN NMP OPERATION.**

(1) Manure storage facilities shall be designed, constructed, located, operated, maintained, and, ~~[when]~~ **if** no longer used for the storage of manure, removed from service, ~~[to prevent the pollution of]~~ **in a manner that protects** surface water and groundwater **quality**, and **prevents** the offsite migration of ~~{pollution, by meeting the standards contained in the *Manure Management Manual* and the}~~ **NUTRIENTS. IMPLEMENTATION OF BMPS CONTAINED IN THE *Pennsylvania Technical Guide* MAY BE USED TO SATISFY THIS REQUIREMENT,** except if these standards conflict with this subchapter. **OTHER BMPS MUST BE APPROVED BY THE COMMISSION.**

(2) In addition to complying with paragraph (1), manure storage facilities shall be designed and located in accordance with the following criteria:

(i) Facilities shall comply with the applicable criteria in **§ 91.36 (relating to pollution control and prevention at agricultural operations).**

(ii) **Facilities shall comply with the applicable criteria in** Chapter 105 (relating to dam safety and waterway management).

~~[(ii)]~~ **(iii)** The location and construction of facilities to be placed within a floodplain shall be consistent with local ordinances developed under the Pennsylvania Flood Plain Management Act (32 P. S. §§ 679.101—679.601), which relates to the dangers and damage of floodwaters.

~~[(iii)]~~ **(iv)** The sides of facilities located in a floodplain shall be protected from erosion and scouring from a 25 year flood event.

~~[(iv)]~~ **(v)** For ~~{CAOs}~~ OPERATIONS that were producing livestock or poultry on or before October 1, 1997, facilities, except reception pits and transfer pipes, may not be constructed:

(A) Within 100 feet of ~~{a}~~ AN INTERMITTENT OR perennial stream, river, spring, lake, pond or reservoir.

(B) WITHIN 100 FEET OF A WETLAND THAT IS IDENTIFIED ON THE NATIONAL WETLANDS INVENTORY MAPS, IF THE FOLLOWING ARE MET:

(1) THE WETLAND IS WITHIN THE 100-YEAR FLOODPLAIN OF AN EXCEPTIONAL VALUE STREAM SEGMENT, AND

(2) SURFACE FLOW IS TOWARD THE WETLAND.

~~(C)~~ **(D)** Within 100 feet of a private water well, or open sinkhole.

~~{(C)}~~ **(D)** Within 100 feet of an active public drinking water well, unless other State or Federal laws or regulations require a greater isolation distance.

~~{(D)}~~ **(E)** Within 100 feet of an active public drinking water source surface intake, unless other State or Federal laws or regulations require a greater isolation distance.

~~{(E)}~~ **(F)** Within 100 feet of a property line, unless the landowners within the 100 feet distance from the facility otherwise agree and execute a waiver in a form acceptable to the Commission.

~~{(F)}~~ **(G)** Within 200 feet of ~~{a}~~ **AN INTERMITTENT OR** perennial stream, river, spring, lake, pond or reservoir, or any water well, **OR WETLAND DESCRIBED IN (B),** **[where these facilities] if a facility** (except permanent stacking and compost facilities) **[are] is** located on slopes exceeding 8% or **[have] a facility has** a capacity of 1.5 million gallons or greater.

~~{(G)}~~ **(H)** Within 200 feet of a property line, **[where these facilities] if a facility** (except permanent stacking and compost facilities) **[are] is** located on slopes exceeding 8%**[,where] and if** the slope is toward the property line, or **[have] a facility has** a capacity of 1.5 million gallons or greater, unless the landowners within the 200 foot distance from the facility otherwise agree and execute a waiver in a form acceptable to the Commission.

[(v)] (vi) For ~~{CAOs}~~ **NMP OPERATIONS** ~~{on agricultural operations}~~ that come into existence after October 1, 1997, facilities, except reception pits and transfer pipes, may not be constructed:

(A) Within 100 feet of ~~{a}~~ **AN INTERMITTENT OR** perennial stream, river, spring, lake, pond or reservoir.

(B) WITHIN 100 FEET OF A WETLAND THAT IS IDENTIFIED ON THE NATIONAL WETLANDS INVENTORY MAPS, IF THE FOLLOWING ARE MET:

(1) THE WETLAND IS WITHIN THE 100-YEAR FLOODPLAIN OF AN EXCEPTIONAL VALUE STREAM SEGMENT, AND

(2) SURFACE FLOW IS TOWARD THE WETLAND.

~~(C)~~ **(C)** Within 100 feet of a private water well, or open sinkhole.

~~{(C)}~~ **(D)** Within 100 feet of an active public drinking water well, unless other State or Federal laws or regulations require a greater isolation distance.

~~{(D)}~~ **(E)** Within 100 feet of an active public drinking water source surface intake, unless other State or Federal laws or regulations require a greater isolation distance.

~~{(E)}~~ **(F)** Within 200 feet of a property line, unless the landowners within the 200 foot distance from the facility otherwise agree and execute a waiver in a form acceptable to the Commission.

~~{(F)}~~ **(G)** Within 200 feet of ~~{a}~~ **AN INTERMITTENT OR** perennial stream, river, spring, lake, pond, reservoir or any water well, **OR WETLAND DESCRIBED IN (B)**, [where these facilities] **if a facility** (except permanent stacking and compost facilities) [are] **is** located on slopes exceeding 8% or [have] **has** a capacity of 1.5 million gallons or greater.

~~{(G)}~~ **(H)** Within 300 feet of a property line, [where these facilities] **if a facility** (except permanent stacking and compost facilities) [are] **is** located on slopes exceeding 8%, [where] **and if** the slope is toward the property line, or [have] **a facility has** a capacity of 1.5 million gallons or greater, unless the landowners within the 300 foot distance from the facility otherwise agree and execute a waiver in a form acceptable to the Commission.

[(vi)] (vii) The Commission or a delegated conservation district may waive the distance restrictions in subparagraphs **[(iv)] (v)(A), (B), (C)** and ~~{(E)—(G)}~~ **{(F)} (G)**, if the following can be demonstrated to the satisfaction of the Commission or a delegated conservation district:

(A) The siting restrictions contained in subparagraph [(iv)] (v) would make the placement economically unreasonable or physically impractical.

(B) A site investigation ~~{including consultation with affected landowners}~~ has been conducted which demonstrates that the proposed system will protect water quality and protect against offsite migration of nutrients.

(C) The type, design and contingency plan developed for the facilities meet additional criteria the Commission or delegated conservation district, in consultation with the NRCS, may require to protect water quality, and protect against offsite migration of nutrients.

(D) In the case of a private water well, the well construction meets the criteria that the Commission, in consultation with the NRCS, deems necessary to protect water quality. There will be no waivers granted from the setback requirements for public water wells or sources.

(viii) Manure storage facilities constructed after October 1, 1997 on CAOs that were in existence prior to October 1, 1997, shall meet all applicable criteria established under this section.

(3) The designer of the manure storage facility [required by] **described in** the plan shall address the following:

(i) Verification of the minimum manure storage period and minimum manure storage volume documented in the current plan.

(ii) Determination of the type and dimensions of facilities considering the environmental and space limitations of the site, as well as the operator's preference.

(iii) An onsite investigation to evaluate the site suitability for a facility ~~in accordance with the standards in the *Manure Management Manual* and the *Pennsylvania Technical*~~

~~Guide~~: THE CRITERIA CONTAINED IN THE PENNSYLVANIA TECHNICAL GUIDE MAY BE USED TO SATISFY THIS REQUIREMENT. OTHER CRITERIA SHALL BE APPROVED BY THE COMMISSION.

(b) The repair of an existing manure storage facility that is part of a plan developed for ~~a CAO~~ AN NMP OPERATION shall ~~comply with applicable standards in the Manure Management Manual and the Pennsylvania Technical Guide.~~ BE DONE IN A MANNER THAT PROTECTS SURFACE WATER AND GROUNDWATER QUALITY, AND PREVENTS THE OFFSITE MIGRATION OF NUTRIENTS. APPLICABLE STANDARDS IN THE PENNSYLVANIA TECHNICAL GUIDE MAY BE USED TO MEET THIS REQUIREMENT. OTHER STANDARDS MUST BE APPROVED BY THE COMMISSION. The location standards do not apply to these facility repairs.

(c) The site specific design for the construction, expansion or major repair of a liquid or semisolid manure storage facility covered under the act shall be done or approved by an engineer registered in this Commonwealth. The engineer shall certify that the design ~~complies with the applicable design standards described in the Manure Management Manual and the Pennsylvania Technical Guide.~~ PROTECTS SURFACE WATER AND GROUNDWATER QUALITY, AND PREVENTS THE OFFSITE MIGRATION OF NUTRIENTS. COMPLIANCE WITH THE APPLICABLE DESIGN STANDARDS DESCRIBED IN THE PENNSYLVANIA TECHNICAL GUIDE MAY BE USED TO MEET THIS REQUIREMENT. OTHER STANDARDS MUST BE APPROVED BY THE COMMISSION.

(D) 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 ~~is meeting the criteria established in the Manure Management Manual and the Pennsylvania Technical Guide.~~, MEETING THE REQUIREMENTS OF THIS SUBSECTION INCLUDING APPLICABLE SETBACKS, has been completed ~~is~~, and that any applicable setback requirements have been met. FOLLOWING COMPLETION OF THE INSTALLATION OR REPAIR, ~~The~~ **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, ~~and~~ construction **AND LOCATION** standards.**

~~(d)~~ **(E)** A written site specific contingency plan, ~~developed in accordance with the standards contained in the Pennsylvania Technical Guide,~~ addressing actions to be taken in the event of a manure leak or spill from a manure storage facility covered under the act **IN ORDER TO PROTECT SURFACE WATER AND GROUNDWATER QUALITY, AND PREVENT THE OFFSITE MIGRATION OF NUTRIENTS**, shall be developed and kept onsite at the operation. **THE STANDARDS CONTAINED IN THE PENNSYLVANIA TECHNICAL GUIDE MAY BE USED TO MEET THIS REQUIREMENT. OTHER STANDARDS MUST BE APPROVED BY THE COMMISSION.** In the case of a leak or spill of manure from a manure storage facility covered under the act, the operator is responsible for implementation of the site specific contingency plan developed for the operation. The contingency plan shall contain information necessary to meet the notification requirements for

reporting leak or spill events which would result in pollution or create a danger of pollution to surface water or groundwater contained in [§ 101.2(a)] § 91.33 (relating to incidents causing or threatening pollution).

~~{(c) It is recommended that the operator provide a copy of the contingency plan to the local emergency management agency that would assist during a major leak or spill event}.~~

PLAN REVIEW AND IMPLEMENTATION ~~{FOR CAOS}~~

§ 83.361. Initial plan review and approval.

(a) Plans ~~{or plan amendments required}~~ for ~~{CAOs}~~ NMP OPERATIONS shall be submitted for initial review and approval to delegated conservation districts, or alternatively to the Commission for ~~{CAOs}~~ NMP OPERATIONS located in counties not delegated administrative authority under § 83.241 (relating to delegation to local agencies). A person performing the plan review shall be certified in accordance with the Department of Agriculture's nutrient management specialist certification requirements in 7 Pa. Code §§ 130b.1—130b.51 (relating to nutrient management certification).

(b) ~~{The Commission or a delegated conservation district shall approve} [, modify] {or disapprove the plan or plan amendment within 90 days of receipt of a complete plan or plan amendment. The notice of determination to} [modify or] {disapprove a plan} {or plan amendment} {shall be provided in writing to the operator submitting the} [same] {plan or plan amendment, and shall include an explanation specifically stating the reasons for} [modification or] ~~{disapproval.}~~ The Commission or a delegated conservation district will, within 10 days from the date of receipt of the plan ~~{or plan amendment}~~, provide notice to the~~

operator indicating [any missing or incomplete elements of the plan submission] whether all of the required plan elements have been received.

(c) ~~{Approvals will be granted only for those plans that satisfy the requirements of} [the act and] ~~{this subchapter.}~~~~ THE COMMISSION OR A DELEGATED CONSERVATION DISTRICT SHALL APPROVE OR DISAPPROVE THE PLAN OR PLAN AMENDMENT WITHIN 90 DAYS OF RECEIPT OF A COMPLETE PLAN OR PLAN AMENDMENT.

(d) ~~{If a plan or plan amendment is disapproved, the operator submitting the plan or plan amendment for the first time shall have 90 days after receipt of the notice of disapproval to resubmit a revised plan or plan amendment}~~ IF THE COMMISSION OR DELEGATED CONSERVATION DISTRICT DOES NOT ACT ON THE PLAN WITHIN THAT 90 DAYS, THE AGRICULTURAL OPERATION THAT SUBMITTED PLAN IS AUTHORIZED TO IMPLEMENT THE PLAN. THE COMMISSION OR DELEGATED CONSERVATION DISTRICT WILL THEREAFTER HAVE ANOTHER 90 DAYS TO COMPLETE REVIEW OF THE PLAN, BEGINNING ON THE EXPIRATION OF THE INITIAL 90 DAY REVIEW PERIOD. IF THE COMMISSION OR DELEGATED CONSERVATION DISTRICT FAILS TO ACT WITHIN THE SECOND 90 DAY PERIOD, IT SHALL BE DEEMED APPROVED.

(e) ~~{An agricultural operation that submits a complete plan or plan amendment is authorized to implement the [same] plan or plan amendment if the Commission or a delegated conservation district fails to act within 90 days of submittal, beginning on the date of receipt of the complete plan or plan amendment by the Commission or delegated~~

~~conservation district. When the Commission or a delegated conservation district fails to act within 90 days of plan submission, and the plan or plan amendment is resubmitted and the delegated conservation district or Commission again fails to act within 90 days of resubmittal, it shall be deemed approved.~~ THE NOTICE OF DETERMINATION TO DISAPPROVE A PLAN SHALL BE PROVIDED IN WRITING TO THE OPERATOR SUBMITTING THE PLAN, AND SHALL INCLUDE AN EXPLANATION SPECIFICALLY STATING THE REASONS FOR DISAPPROVAL. IF A PLAN FOR A CAO IS DISAPPROVED, THE OPERATOR SUBMITTING THE PLAN FOR THE FIRST TIME SHALL HAVE 90 DAYS AFTER RECEIPT OF THE NOTICE OF DISAPPROVAL TO RESUBMIT A REVISED PLAN.

(F) APPROVALS WILL BE GRANTED ONLY FOR THOSE PLANS THAT SATISFY THE REQUIREMENTS OF THIS SUBCHAPTER, INCLUDING VERIFICATION BY THE DELEGATED CONSERVATION DISTRICT OR DEP THAT THE OPERATION HAS A CURRENT AGRICULTURAL EROSION AND SEDIMENT CONTROL PLAN. FOR CAOS AND VAOS EXISTING ON OCTOBER 1, 2006, THIS AGRICULTURAL EROSION AND SEDIMENT CONTROL PLAN VERIFICATION IS NOT REQUIRED UNTIL OCTOBER 1, 2009.

§ 83.362. Plan implementation.

(a) ~~{A CAO}~~ AN NMP OPERATION shall fully implement the plan [within] consistent with the implementation schedule included as part of the approved plan. Implementation schedules shall not extend past 3 years of the date the plan is approved or deemed approved, or

for which implementation is otherwise authorized under § 83.361(e) (relating to initial plan review and approval), unless the implementation schedule is extended upon approval of the Commission or delegated conservation district. [for cause shown or a plan amendment § 83.371 (relating to plan amendments). The 3-year implementation schedule shall be extended an additional 2 years for individual substantial capital improvements required under an approved plan for an operation required to submit a plan under § 83.261(a) (relating to general) if the following occur:

- (1) The owner or operator demonstrates that the cost of all or part of the individual improvements for which the extension is applicable cannot be financed through available funding mechanisms.
 - (2) A sum of \$2 million or more has not been appropriated for grants and loans to the nutrient management fund above any Chesapeake Bay Nonpoint Source Pollution Abatement moneys that may be appropriated to the fund by October 1, 1998.]
- (b) [Whatever adjustments are made in the implementation of the approved plan, the nutrient] Nutrient application rates shall be [balanced] developed as described in § 83.293 (relating to determination of nutrient application rates) and shall be implemented upon approval of the plan ~~for plan amendment, as applicable~~. The [owner,] operator [or specialist] shall review the approved plan at least annually to ensure that this condition is met.
- (c) At least every 3 years, the plan, RECORDS, AND THE STATUS OF THE OPERATION'S COMPLIANCE, shall be reviewed by a ~~commercially or individually certified~~ nutrient management specialist ~~[- If the agricultural operation is still consistent with the approved plan and the nutrient content and soil test values used in the plan have~~

~~not significantly changed, and the accepted reference factors used in the plan have not changed since approval, the specialist shall provide notice of this to the reviewing agency. A plan amendment shall be submitted to the reviewing agency in accordance with § 83.361(a), if the agricultural operation has changed from that described in the approved plan [(see) as required by § 83.371 (relating to plan amendments)]|-}~~ **TO DETERMINE WHETHER**

A PLAN AMENDMENT IS REQUIRED, ACCORDING TO THE FOLLOWING:

(1) UNLESS OTHERWISE REQUIRED BY §83.371, IF THE APPROVED PLAN CONTINUES TO ADEQUATELY REPRESENT THE AGRICULTURAL OPERATION, INCLUDING THE MANURE NUTRIENT CONTENT AND SOIL TEST VALUES IN THE PLAN, AND IF THE BOOK VALUES USED IN THE APPROVED PLAN HAVE NOT CHANGED TO THE EXTENT THAT IT WOULD AFFECT THE APPLICATION RATES USED IN THE PLAN, NO AMENDMENT IS REQUIRED. THE SPECIALIST SHALL PROVIDE NOTICE OF THIS TO THE REVIEWING AGENCY.

(2) THE PHOSPHORUS APPLICATION DETERMINATION, INCLUDING THE PROCEDURES AND CRITERIA FOR ADDRESSING PHOSPHORUS CONTAINED IN §83.293(C) SUCH AS THE PHOSPHORUS INDEX, SHALL BE REEVALUATED FOR EACH CROP MANAGEMENT UNIT ONCE EVERY THREE YEARS AFTER INITIAL APPROVAL OF THE PLAN. A PLAN AMENDMENT IS REQUIRED IF THERE IS A CHANGE IN MANURE APPLICATION AS A RESULT OF THIS REEVALUATION.

(3) A PLAN AMENDMENT SHALL BE SUBMITTED TO THE REVIEWING AGENCY IN ACCORDANCE WITH § 83.361(A), IF THE AGRICULTURAL OPERATION HAS CHANGED FROM THAT DESCRIBED IN THE APPROVED PLAN, AS REQUIRED BY § 83.371 (RELATING TO PLAN AMENDMENTS).

(d) Limited liability protection, as described in § 83.206 (relating to limitation of liability), is afforded to those operators properly implementing an approved plan under this subchapter.

PLAN AMENDMENTS AND TRANSFERS ~~{FOR CAOS}~~

§ 83.371. Plan amendments.

(a) A plan amendment is required [when] if the operator ~~{of a CAO}~~ expects to make significant changes in the management of nutrients from those contained in the approved plan, **PRIOR TO THOSE CHANGES BEING IMPLEMENTED.** Those significant changes in the management of ~~{a nutrient}~~ **NUTRIENTS** which would require a plan amendment are [as follows] **any one of the following:**

(1) A net increase of greater than 10% occurs in AEU's per acre.

(2) A change in crop management that results in a reduction of greater than 20% in nitrogen necessary for realistic expected crop yields or the amount the crops will utilize for an individual crop year.

(3) A change in [the method of] excess manure utilization [under § 83.301 (relating to excess manure utilization plans for CAOs)] **arrangements as described in the approved plan.**

(A) No amendment is required to address the loss of an importer if the loss does not impair the operator's ability to properly manage the manure generated on the operation.

(B) NO AMENDMENT IS REQUIRED TO ADDRESS THE ADDITION OF A NEW IMPORTER IF THE OPERATOR SUBMITS THE NUTRIENT BALANCE SHEET AND SIGNED AGREEMENT REQUIRED BY THIS SUBCHAPTER TO THE DELEGATED CONSERVATION DISTRICT OVERSEEING THE EXPORTING FARM, PRIOR TO TRANSPORT. THE DISTRICT SHALL VERIFY THE ADEQUACY OF THE DOCUMENTATION, UPDATE THE PLAN FILE WITH THE NEW DOCUMENTATION, AND REQUIRE FORMAL APPROVAL OF THE NEW IMPORTER THROUGH A PLAN AMENDMENT WHEN THE PLAN IS SUBJECT TO THE TRIENNIAL REVIEW UNDER §83.361(C).

(4) [When] **If** calculations in the plan as originally submitted are in error, or **if** figures used in the plan are inconsistent with ~~{those contained in the *Pennsylvania Agronomy Guide* and}~~ ~~[the *Manure Management Manual*] [associated fact sheets and manuals]~~ **THE REQUIREMENTS OF THIS SUBCHAPTER**, and adequate justification has not been given in writing for the inconsistency.

(5) [When] **If** a [different] BMP[,], **different** than that called for in the approved plan, is proposed to address a manure management or stormwater management concern.

(6) [When] **If**, after the first 3 years of implementing the plan, actual yields are less than 80% of the expected crop yields used in the development of the plan.

(7) If alternative organic nutrient sources will replace or augment nutrient sources described in the plan.

(8) If additional lands are brought into the operation through purchase, lease or renting.

(9) If there is a change in the manure management system that is expected to result in a [significant change in the manure] DIFFERENT nutrient content THAT REQUIRES A CHANGE IN MANURE APPLICATION RATES PURSUANT TO §83.293.

(10) IF A CHANGE IN MANURE APPLICATION IS NECESSARY BASED ON THE REEVALUATION OF POTENTIAL PHOSPHORUS LOSS AS PART OF THE TRIENNIAL REVIEW UNDER §83.362(C), OR A CHANGE IN MANURE APPLICATION IS NECESSARY DUE TO THE END OF THE PHASE-IN PERIOD UNDER §83.293(C)(3).

(b) A plan amendment **under subsection (a)** shall be developed and certified by a nutrient management specialist and shall be submitted to the reviewing agency **{in} [accordance with] under § [83.361(a)] 83.371(a)** (relating to **[initial] plan [review and approval] amendments**).

(c) Plan updates to address operational or computation changes other than those described in subsection (a) shall be developed and certified by a commercial or individual nutrient management specialist, retained at the operation and submitted to the district for inclusion in the approved nutrient management plan. A PLAN AMENDMENT SHALL BE SUBMITTED UNDER THIS SECTION TO OBTAIN APPROVAL OF THESE CHANGES, WHEN THE PLAN IS SUBJECT TO THE TRIENNIAL REVIEW UNDER §83.361(C).

§ 83.372. Amendments due to unforeseen circumstances.

Changes in the implementation of plans due to unforeseen circumstances shall be certified by a nutrient management specialist as meeting applicable requirements of this subchapter and submitted to the district within 30 days of implementation. The amendments called for under this section will not require the review and approval of the Commission or a delegated conservation district, but shall temporarily become part of the plan until normal operations are resumed.

Unforeseen circumstances include the following:

- (1) Outbreak of contagious disease. Manure management shall be consistent with the procedures in § 83.381 (relating to manure management in emergency situations).
- (2) Failures or malfunctions of equipment or storage that require a change in manure handling procedures.
- (3) Other unforeseen circumstances that cause a significant change in the management of nutrients on the agricultural operation, such as:
 - (i) Unforeseen weather conditions which significantly impact plan implementation or crop failure due to adverse weather conditions.
 - (ii) Unanticipated loss of rented land that would create a reduction of greater than 20% in the nitrogen necessary for expected crop yields.

§ 83.373. Plan transfers.

- (a) An approved nutrient management plan may be transferred to a subsequent owner or operator of an agricultural operation by notification of the transfer to the Commission or delegated

conservation district, unless the transfer results in operational changes requiring a plan amendment under § 83.371 (relating to plan amendments).

(b) If the transfer of the **approved** plan results in operational changes requiring a plan amendment under § 83.371 (**relating to plan amendments**), the plan amendment shall be submitted for approval of the Commission or a delegated conservation district along with, or before, the notification required under subsection (a).

CONTAGIOUS DISEASE EMERGENCIES ~~{ON CAOS}~~

§ 83.381. Manure management in emergency situations.

(a) **[In situations when]** **If** there is an outbreak of a contagious disease as regulated by the Department of Agriculture, manure management shall be consistent with requirements in the Department of Agriculture's order of quarantine issued under the Domestic Animal Act (3 P. S. § § 311—354) and regulations thereunder.

(b) The Department of Agriculture will notify the Commission when a quarantine is imposed on an agricultural operation covered by the act. The Department of Agriculture will supply the Commission and delegated conservation district with a copy of the quarantine document.

(c) Unless otherwise directed by the quarantine, an amended plan shall be developed addressing the management of manure under the quarantine. This plan shall be certified by a nutrient management specialist prior to implementation and submitted to the reviewing agency within 30 days of implementation.

(d) **[Where]** **If** nutrients are applied in excess of crop need due to the quarantine restrictions placed on the manure, and the cropping sequence permits, cover crops shall be planted to the site

to minimize the loss of these nutrients. The harvesting of these cover crops is encouraged to facilitate the removal of excess nutrients.

(e) The temporary storage of manure during the quarantine shall be done under § 83.311 (relating to manure management).

(f) The application of manure during the quarantine shall be done under § 83.294[(5)] (f) (relating to nutrient application procedures).

(g) Standard soil tests will be required each year for crop **[fields] management units** where the implementation of the quarantine required that nutrients be applied in excess of the amount the crop can use, **and shall continue for 3 successive years thereafter.** In addition to the standard test, an appropriate test indicating the amount of nitrogen available for crop uptake will be required for 1 year beyond the cessation of excess manure application.

~~PLAN SUMMARY INFORMATION FOR~~
~~[VOLUNTEER OR FINANCIAL ASSISTANCE] VAO PLANS~~

~~§ 83.391. Identification of agricultural operations and acreage.~~

~~(a) Agricultural operation identification sheet. The plan shall include an agricultural operation identification sheet which shall include the following information:~~

~~(1) The operator name, address and telephone number.~~

~~(2) A brief description of the operation including:~~

~~(i) Animal types included on the operation.~~

~~(ii) General scope of the operation (general acreage of the cropland, hayland and pastures, and farmstead acres, and animal numbers for the various types of animals on the operation).~~

~~(iii) The crop rotation planned to be used on the operation.~~

~~(iv) The dimensions and capacity of any existing manure storage facilities on the operation.~~

~~(v) The capacity and practical application rates of manure application equipment that will be used on the operation, as applicable.~~

~~{(2)} (3) The signature of the operator, which meets the signature requirements of the Commission, indicating the operator's concurrence with the practices outlined in the plan.~~

~~{(3)} (4) The counties where land included in the plan is located.~~

~~[(4)] (5) The watersheds in which the [of] land included in the plan is located. The existence of any special protection waters, as identified in Chapter 93 [§ 93.9] (relating to [designated water uses and water quality criteria] water quality standards), shall also be noted.~~

~~[(5)] (6) The total acreage of the agricultural operation included in the plan. This acreage shall include:~~

~~(i) Lands located at or adjacent to the animal production facility, which are owned by the operator of the facility;~~

~~(ii) Other owned, rented or leased lands, under the management control of the operator of the facility, that are used for the application, treatment or storage of manure generated at the facility.~~

~~[(6)] (7) The total acreage of land of the agricultural operation on which nutrients shall be applied. The total acreage shall be separated into acres of owned land and acres of rented or leased land.~~

~~[(7)] (8) The number of AEU's per acre on the agricultural operation.~~

~~[(8)] (9) The name, [and] nutrient management certification program identification number, and signature of the nutrient management specialist that prepared the plan, the date of plan preparation and the date of revisions, if any.~~

~~(b) Maps and aerial photographs. The plan shall include a topographic map drawn to scale identifying the lands included in the agricultural operation, and shall also contain maps or aerial photographs of sufficient scale which clearly identify:~~

~~(1) The location and boundaries of the agricultural operation.~~

~~(2) Individual field boundaries under the plan.~~

~~(3) Field number and acreage of each field.~~

~~(4) The identification of all soil types and slopes on the agricultural operation. An NRCS soil survey map with the soil identification legend [shall] will be sufficient to satisfy this requirement. These soil survey maps may be available at the county NRCS office or conservation district office.~~

~~(5) The location of areas where manure application is restricted under [may be limited based on] § 83.404[(5)](f) (relating to nutrient application procedures).~~

~~(6) The location of proposed or existing structural BMPs, including manure storage facilities, on the operation:~~

~~(7) The location of existing or proposed temporary manure stacking areas or in-field stacking locations:~~

~~(c) Phosphorus Index. The plan shall include an appendix containing the completed Phosphorus Index spreadsheet or other similar information summary which shall list the individual source and transport factor values, as appropriate, and the final Phosphorus Index value, for each individual area evaluated on the operation, as required by the Phosphorus Index:~~

~~(d) Agreements with importers and brokers. The plan shall include an appendix containing signed exporter/importer and exporter/broker agreements, and nutrient balance sheets and associated maps, for operations where these documents are required under this~~

~~Subchapter:~~

§ 83.392. Summary of plan.

(a) The plan shall contain a summary that includes:

(1) A ~~chart~~ manure summary table listing:

**(i) ~~The total amount of manure planned to be generated on the operation~~
annually.**

(ii) ~~The total amount of manure planned to be used on the operation~~ annually.

**(iii) ~~The total amount of manure planned to be exported from the operation~~
annually.**

**(2) A ~~[N]nutrient application [rates by field or crop group] summary documenting the~~
planned nutrient applications for each crop management unit listing:**

~~(i) Acres:~~

~~(ii) Expected yield:~~

~~(iii) Nutrients applied as starter chemical fertilizer:~~

~~(iv) Planned manure application period:~~

~~(v) Planned manure application rate and type of manure to be applied:~~

~~(vi) Planned manure incorporation time:~~

~~(vii) Rate of other organic nutrient sources planned to be applied:~~

~~(viii) Other nutrients applied through chemical fertilizer:~~

~~(ix) Other comments or notes:~~

**(3) General [P]procedures and provisions for the utilization or proper disposal of excess
manure.**

~~(b) The summary shall reference [M] manure management and storage practices, stormwater runoff control practices and other appropriate BMPs necessary to protect the quality of surface water and groundwater [may be referenced in the summary, but shall be covered by the appropriate section of the plan].~~

~~NUTRIENT APPLICATION FOR [VOLUNTEER OR
FINANCIAL ASSISTANCE] VAO PLANS~~

~~§ 83.401. Determination of available nutrients.~~

~~(a) The plan shall [include the amount of] address each type of nutrient source [used] generated or planned to be used on the agricultural operation, including: manure, [sludges] biosolids, compost, [cover crops] commercial fertilizers and other nutrient[s] sources [that will be applied to the agricultural operation].~~

~~(b) The amount and nutrient content of each manure group [to be applied] generated on the agricultural operation shall be [determined] documented in the plan as follows:~~

~~(1) [The plan shall include] List the average number of animals [of each animal type] for each manure group, on a typical production day, for the agricultural operation.~~

~~(2) List [T]the amount of manure [produced] generated and when it is available for [spreading] land application on the agricultural operation or for other planned uses. If actual manure production records are available for the operation, these records shall be used for determining the manure produced on the operation. If actual records of manure production do not exist for the operation, the amount of manure produced shall be calculated based on the average number of [AEUs] animal units on the agricultural~~

~~operation [or actual production data], and the storage capacity of manure storage facilities, if present. Bedding, wash water, rain and runoff, when mixed with the manure, shall be included in determining the total volume of manure [to be applied] generated. The plan shall include the calculations or variables used for determining the amount of manure produced on the operation.~~

(3) Nutrient content of manure:

~~(i) Analytical manure testing results shall be used in the development of the plan. These manure tests shall include an analysis of the percent solids, total nitrogen (as N), ammonium nitrogen (as NH₄-N), total phosphate (as P₂O₅), and total potash (as K₂O), for each manure group generated on the operation, and these analytical results shall be recorded in the plan. [For the preparation of the plan and plan amendments, it is recommended that the nutrient content of the manure be determined by] These manure analyses shall be performed using accepted manure sampling and chemical analysis methods as [outlined in the *Manure Management Manual*, or the *Pennsylvania Agronomy Guide*] specified by the Commission [unless otherwise approved by the Commission or delegated conservation district].~~

~~(ii) [When sampling and analysis is not done, the nutrient management specialist] For newly proposed operations, and for manure groups on existing operations where sampling and analysis are not possible prior to initial plan development, the plan shall use either standard book values such as those contained in the [Manure Management Manual or the] *Pennsylvania Agronomy Guide* to determine the nutrient content of the manure[-]; or analytical results from a similar facility using a like management scheme, as approved~~

~~by the Commission or delegated conservation district. The nutrient content of the manure shall be recorded in the plan. Samples and chemical analysis of the manure generated on the operation shall be obtained within 1 year of implementation of the approved plan, and the requirements of § 83.481 (relating to plan amendments) shall be followed as applicable.~~

~~(iii) After approval of the initial plan, manure tests are required to be taken annually for each manure group generated on the operation.~~

~~(c) The nitrogen available from manure shall be based on the appropriate availability factors such as those contained in the [Manure Management Manual or the] *Pennsylvania Agronomy Guide*. The plan shall include [T]the amount of nitrogen available in the manure, and the planned manure incorporation times used to determine the nitrogen available [shall be included in the plan].~~

~~(d) The residual nitrogen from legume crops and applications of manure, as described in the *Pennsylvania Agronomy Guide*, shall be recorded in the plan and credited when determining nutrient application rates.~~

~~{(e) — For the development of the initial plan, soil tests shall be required to represent the fields in the operation for phosphorus (P), potassium (K), soil pH and lime requirement using those procedures for the Northeastern United States, Bulletin #493, published by the University of Delaware, or other Commission approved procedures. Soil tests conducted within the previous 3 years prior to submitting the initial plan are acceptable. After the approval of the initial plan, soil tests shall be required at least every 6 years from the date of the last test. Soil tests, or the results of the soil tests, are not required to be submitted with the plan, but shall be kept on record at the operation.}~~

~~§ 83.402. Determination of nutrients needed for crop production.~~

~~(a) The plan shall include the acreage and realistic expected crop yields for each crop [group] management unit.~~

~~(b) For the development of the initial plan, expected crop yields may not exceed those considered realistic for the soil type and climatic conditions, as set by the operator and the specialist, and approved by the Commission or a delegated conservation district. If actual yield records are available during the development of the initial plan, the expected crop yields [may] shall be based on these records.~~

~~(c) If after the first 3 years of implementing the plan, the yields do not average at least 80% of the planned expected yield, the plan shall be amended to be consistent with the documented yield levels unless sufficient justification for the use of the higher yields is [provided in writing to] approved by the Commission or a delegated conservation district. The amendment shall be submitted as required under §§ 83.471—83.483.~~

~~(d) [For] When determining expected crop yields for [future] plan [updates and] amendments, expected crop yields shall be based on documented yield levels achieved for the operation. Expected crop yields higher than historically achieved may be used if the operator provides sufficient justification in writing to the Commission or delegated conservation district for the use of the higher yields [to the Commission or delegated conservation district].~~

~~(c) When developing the initial plan, soil tests shall be required for each crop management unit on the operation, to determine the level of phosphorus (as P), potassium (as K), and soil pH, as follows:~~

~~(1) Use those procedures recommended by Penn State and published in *Recommended Soil Testing Procedures for the Northeastern United States*, Bulletin #493, published by the University of Delaware, or other Commission approved procedures.~~

~~(2) Soil tests conducted within the previous 3 years prior to submitting the initial plan are acceptable.~~

~~(3) After the approval of the initial plan, soil tests are required for each crop management unit at least every 3 years from the date of the last test.~~

~~(4) The plan shall include soil test results for phosphorus (as P) in parts-per-million (ppm) as a component of the Phosphorus Index analysis for each crop management unit. Other soil test results are not required to be submitted with the plan, but shall be kept on record at the operation.~~

~~{(c)} (f) The plan shall include [a determination] recommendations based on current soil tests [of] for the amount of [nutrients] nitrogen (as total N) and phosphorus (as P₂O₅) necessary for realistic expected crop yields.~~

~~{(f)} (g) The procedures in the *Soil Test Recommendations Handbook For Agronomic Crops*, Penn State Agricultural Analytical Services Laboratory, shall [Pennsylvania Agronomy Guide or Manure Management Manual may] be used when necessary to [assist in determining] determine or adjust the recommended amount of nutrients necessary [for~~

~~achieving] to achieve realistic expected crop yields. Other methodologies for this adjustment may be used as approved by the Commission.~~

§ 83.403. Determination of nutrient application rates.

~~(a) [Nitrogen] Manure and other nutrient sources shall be applied so as not to exceed the amount of nitrogen [only in the amounts] necessary to achieve realistic expected crop yields or at a rate not exceeding [what] the amount of nitrogen the crop will utilize for an individual crop year.~~

~~(b) In addition to the nitrogen limitations described in subsection (a), applications of manure and other nutrient sources shall also be limited as determined by the Phosphorus Index, as follows:~~

~~(i) Apply the Phosphorus Index on all areas of the agricultural operation where nutrients will be applied.~~

~~(ii) Implement the resulting management actions as provided through the Phosphorus Index on each crop management unit.~~

~~{(b)} (c) The planned manure application rate shall be recorded in the plan. The planned manure application rate [may] shall be the lesser of any rate equal to or less than the balanced manure application rate based on nitrogen or the rate as determined by the Phosphorus Index.~~

~~(i) The balanced manure application rate based on nitrogen shall be determined by first subtracting the amount of available residual nitrogen and any other applied nitrogen,~~

~~such as nitrogen applied in the starter fertilizer, from the amount of nitrogen necessary for realistic expected crop yields, and then dividing this by the available nitrogen content of the manure as determined by standard methods under § 83.401 (relating to determination of available nutrients).~~

~~(ii) The calculation or variables used for determining the balanced rates shall be recorded in the plan.~~

~~{(c)} (d) The plan shall include calculations for each crop management unit indicating the difference between the [recommended nitrogen] amount of nitrogen and phosphorus necessary for realistic expected crop yields pursuant to § 83.402 (relating to determination of nutrients needed for crop production) and the nitrogen and phosphorus applied through all planned nutrient sources, including, but not limited to, manure, [sludge] biosolids, starter fertilizer and other fertilizers, and residual nitrogen. [A deficit may be made up with supplemental nitrogen applications.] A nitrogen availability test may also be used to determine supplemental nitrogen needs.~~

~~§ 83.404. Nutrient application procedures.~~

~~{The plan shall include nutrient application procedures that meet the following criteria:}~~

~~{(1)} (a) Nutrients shall be uniformly applied to fields during times and conditions that will hold the nutrients in place for crop growth, and protect surface water and groundwater in accordance with the approved manure management practices as described in the *Manure Management Manual*.~~

~~[(2)] (b) Intended target spreading periods for the application of manure shall be included in the plan.~~

~~[(3)] (c) Manure [A] application rates and procedures shall be consistent with the capabilities, including capacity and calibration range, of available application equipment. For existing operations and any operation using a commercial manure applicator, the plan shall include the capacity and practical application rates, based on calibration of the existing equipment. For proposed operations not using a commercial custom manure applicator, or where this calibration is not feasible at planning time, the operator shall perform this application equipment calibration analysis prior to the first application of manure, or within 1 year of the facility beginning operation, whichever is sooner, and this information shall be included in any necessary amendments to the plan.~~

~~[(4)] (d) If manure will be applied using an irrigation system, the following applies:~~

~~(1) Application rates for irrigated liquid manure [irrigation] shall be based on the lesser of [either] the following:~~

~~(i) the [nutrient plan] planned application rates in gallons per acre determined in accordance with § 83.403[(a) and (b)] (c) (relating to determination of nutrient application rates); or,~~

~~(ii) the combination of~~

~~(A) [rates] the liquid application rate in inches per hour determined to be within infiltration capabilities of the soil [such as those contained in the NRCS Pennsylvania Irrigation Guide or the Mid West Plan Service, Livestock Waste Facilities Handbook] and~~

~~(B) the liquid application depth in inches not to exceed the soil's water holding capacity within the root zone or any restricting feature at the time of application.~~

~~(2) The liquid application rate and application depth shall be consistent with the current versions of Penn State Fact Sheets F254 through F257 as applicable to the type of irrigation system planned to be used on the operation, and the *NRAES-89 Liquid Manure Application System Design Manual*.~~

~~(c) If liquid or semi-solid manure is planned to be applied at rates greater than 9,000 gallons per acre at any one application time, the rates and amounts shall be limited based on the infiltration rate and water holding capacity of the application areas as described in § 83.404(d). In these instances the plan shall include the computations for the infiltration rates and water holding capacity of the various application areas, and these applications shall not be allowed to exceed either the determined infiltration rate or the water holding capacity of the application sites.~~

~~{(5)} (f) Manure [may] shall not be applied in the following situations:~~

~~(i) Within 100 feet of an open sinkhole where surface water flow is toward the sinkhole, unless the manure is mechanically incorporated within 24 hours of application.~~

~~(ii) Within 100 feet of active private drinking water sources such as wells and springs[, where surface water flow is toward the water source, unless the manure is mechanically incorporated within 24 hours of application].~~

~~(iii) Within 100 feet of an inactive open drinking water well, where surface water flow is toward the water well, unless the manure is mechanically incorporated within 24 hours of application.~~

~~{(iii)} (iv) Within 100 feet of an active public drinking water source, unless other State or Federal laws or regulations require a greater isolation distance.~~

~~{(iv)} (v) Within concentrated water flow areas in which vegetation is maintained, such as ditches, waterways, gullies and swales, during times when soil is frozen, snow covered or saturated.~~

~~{(v)} (vi) Within concentrated water flow areas in which vegetation is not maintained, such as intermittent streams, gullies and ditches.~~

~~{(vi)} (vii) Within 100 feet of streams, springs, lakes, ponds, intakes to agricultural drainage systems (such as in-field catch basins, and pipe outlet terraces), or other types of surface water conveyance, [when] if surface water flow is toward the identified area, [when] and if soil is frozen, snow covered or saturated.~~

~~{(vii)} (viii) Within 200 feet of streams, springs, lakes, ponds, intakes to agricultural drainage systems (such as in-field catch basins, and pipe outlet terraces), or other types of surface water conveyance, [where] if surface water flow is toward the [identified area] surface water or conveyance, [and where] if the slope is greater than 8% as measured within the 200 feet, and if the [during times when] soil is frozen, snow covered or saturated.~~

~~{(viii)} (ix) On crop management units having less than 25% plant cover or crop residue at the time of manure application unless:~~

~~A. For fall applications, the crop management unit is planted to a cover crop in time to allow for appropriate growth (according to standards contained in the *Pennsylvania Technical Guide*).~~

~~**B. For applications in the spring or summer, the crop management unit is planted to a crop that growing season.**~~

~~**C. For winter applications, the crop management unit is addressed under subsection (g).**~~

~~**D. Other practices are implemented to protect surface water and groundwater, which are approved by the Commission and are consistent with the operator's Erosion and Sediment Control Plan.**~~

~~**{(6)} (g) If winter [spreading] application of manure is [anticipated] planned, the application procedures [for the winter spreading of manure] shall be described in the plan. The procedures described in the plan shall be consistent with those contained in the *Manure Management Manual*. [If procedures other than those in the *Manure Management Manual* are to be used, approval shall be obtained from the Department or a delegated conservation district.] The plan shall list all crop management units where winter application is anticipated or restricted, planned ground cover on the application sites, and what procedures shall be utilized for each crop management unit to protect the quality of surface water and groundwater.**~~

~~**(h) In-field stacking of dry manure as a part of manure application is permissible if the manure is land applied on the crop management unit prior to the beginning of the next growing season. If stacking occurs for a longer period then the stack area shall meet *Pennsylvania Technical Guide* standards for a waste stacking and handling pad. All in-field stacking areas shall be located, and stacks shall be shaped, to minimize water absorption and impacts from runoff in accordance with the criteria approved by the Commission.**~~

~~(i) If a commercial manure applicator will be used for the application of the manure on the agricultural operation, the commercial applicator shall meet the requirements of § 83.411(a)(5).~~

~~ALTERNATIVE USES FOR EXCESS MANURE FOR
[VOLUNTEER OR FINANCIAL ASSISTANCE] VAO PLANS~~

~~§ 83.411. Alternative manure utilization plans.~~

~~{For agricultural operations other than CAOs, the plan shall contain a description of the following:~~

~~(1) The estimated amount of manure to be utilized for other than land application on the operation.~~

~~(2) The intended season for the alternative manure utilization.~~

~~(3) The alternative manure utilization method such as:~~

~~(i) Land application by known importers.~~

~~(ii) Transfer through a manure broker.~~

~~(iii) Use on the agricultural operation in a manner other than land application.~~

~~(iv) Marketing through an open advertising system.}~~

~~(a) If manure will be exported for use off the VAO at known agricultural operations for agricultural land application, the following shall apply:~~

~~(1) The plan shall include signed agreements, on a form acceptable to the Commission, between the VAO and each importing operator agreeing to accept the manure from the exporting operation. If the importing operator will be applying manure on lands rented or leased to that importing operator, the agreement shall state that the importing operator has the authority to apply manure on the leased or rented lands.~~

~~(2) The importing operator is responsible for the proper handling and application of the imported manure accepted from an exporter, in accordance with the relevant nutrient balance sheet or the importer's nutrient management plan.~~

~~(3) A VAO exporting manure shall also be responsible for the handling and application of the manure if the VAO, or an employee or contractor of the VAO, applies manure at the importing operation.~~

~~(4) The plan shall include copies of nutrient balance sheets applicable to each crop management unit where the exported manure will be applied. These nutrient balance sheets for importing operations shall include a map identifying the areas where the imported manure will be applied and applicable manure application setbacks relevant to the site, including those identified in § 83.404 (relating to nutrient application procedures). Nutrient management plans implemented at the importing operations may be used to meet this requirement if they are attached to the plan.~~

~~(5) If the VAO will utilize a commercial manure hauler/applicator for the hauling or application of the exported manure, the plan shall list the name of the commercial hauler/applicator that will be used. Only those haulers/applicators that meet the following qualifications shall be acceptable in the plan.~~

~~(i) Demonstrates knowledge of regulatory requirements related to transport and application of manure, as applicable, through completion of training, testing, experience or other means acceptable to the Commission.~~

~~(ii) Has maintained a record of substantial compliance with regulatory requirements to ensure proper handling and application of manure, including this Subchapter, as determined by the Commission.~~

~~(iii) Agrees to maintain records documenting compliance with this Subchapter.~~

~~(iv) Meets other requirements determined by the Commission to ensure the proper hauling and application of manure.~~

~~(6) The Commission may consider the requirements of subparagraph (5) to be satisfied if the hauler or applicator is certified under either a certification program approved by the Commission or as required by statute.~~

~~(b) If manure will be exported for use off of the VAO through a manure broker, the following shall apply:~~

~~(1) The plan shall include a signed agreement, on a form acceptable by the Commission, between the VAO exporting the manure and each broker agreeing to accept manure from the exporting operation. Brokers are responsible for the proper handling and storage (where applicable) of the manure accepted from the VAO. Only brokers that meet the following requirements shall be acceptable in the plan:~~

~~(i) Demonstrates knowledge of regulatory requirements related to transport and application of manure through completion of training, testing, experience or other means acceptable to the Commission.~~

~~(ii) Has maintained a record of substantial compliance with regulatory requirements, including this Subchapter, as determined by the Commission:~~

~~(iii) Agrees to maintain records documenting compliance with this Subchapter:~~

~~(iv) Meets other requirements determined by the Commission to ensure the proper hauling and application of manure:~~

~~(2) The Commission may consider the requirements of subparagraph (1) to be satisfied if the broker is certified under a certification program approved by the Commission or where required by statute:~~

~~(3) If the manure accepted by a broker will be applied to agricultural operations for crop production, the broker shall be responsible for the development of nutrient balance sheets for all crop management units where the manure will be applied. All such nutrient balance sheets shall be retained by the broker and provided by the broker to the importing operation, for retention on the importing operation. Instead of developing nutrient balance sheets, the broker can ensure that an approved nutrient management plan exists for the importing sites:~~

~~(c) If manure will be exported for use off of the VAO to a known importer for use other than agricultural land application, the plan shall include the following information:~~

~~(1) The name and general location of the importing agricultural operation:~~

~~(2) A brief description of the planned use for the imported manure:~~

~~(3) The amount of manure the operator plans to export to the importer annually:~~

~~(4) The planned season for the manure export:~~

- ~~(5) A signed agreement between the VAO and each importing operation agreeing to accept the manure for this use, on a form acceptable by the Commission:~~
- ~~(d) If manure is to be processed or utilized on the VAO in a manner other than for agricultural land application, the plan shall briefly describe the planned use of the manure, including the amount planned to be processed or utilized annually.~~
- ~~(e) If manure is to be exported for use off of a VAO existing on [effective date of the regulations] by using an open advertising system and the importers cannot be identified at planning time, the following shall apply:~~
- ~~(1) The plan shall describe the proposed marketing scheme, including the estimated amount of manure planned to be marketed annually using an open advertising system.~~
 - ~~(2) An operator may only utilize this method of exporting manure if the operator meets the manure broker requirements of § 83.411(b).~~
 - ~~(3) The exporting VAO shall develop nutrient balance sheets for the importing operations, and provide them to the importing operator. These nutrient balance sheets shall be maintained by the exporting VAO, the importing operation and any manure hauler/applicator involved in the exporting of the manure. Nutrient management plans implemented at the importing operations may be used to meet this requirement if they are attached to the plan.~~
- ~~(f) The plan is not required to provide the specific plan details as provided in subsections (a) through (e) in these circumstances:~~
- ~~(1) If an importer receives less than the following amounts of manure from the VAO on an annual basis: 10 tons of solid poultry manure, 50 tons of solid non-poultry manure, or~~

~~25,000 gallons of liquid manure. In these instances, the plan shall list the name and location of the importing operation, and when and how much manure will be exported to the importing operation, as well as the proposed usage of the imported manure.~~

~~(2) If small quantities of manure, not to exceed 2,000 pounds annually, are expected to be marketed to individuals. In these circumstances, the plan shall describe the total amount of manure planned to be marketed in this manner, and the intended use of the manure.~~

~~(g) The land application of manure exported from a VAO shall be restricted as follows:~~

~~— (1) The exported manure shall not be applied to land within 150 feet of surface waters, unless otherwise allowed under an approved nutrient management plan meeting the appropriate planning criteria established under this Subchapter.~~

~~— (2) Land application of all exported manure shall also comply with all other applicable manure application setbacks under § 83.404 (relating to nutrient application procedures).~~

~~MANURE MANAGEMENT FOR [VOLUNTEER OR FINANCIAL ASSISTANCE] VAO PLANS~~

~~§ 83.421. Manure management.~~

~~(a) In the preparation of a plan, the nutrient management specialist [, or specialist in conjunction with other individuals with nutrient runoff control expertise such as NRCS or conservation district personnel,] shall perform a site visit to conduct a review of the adequacy of existing manure management practices to prevent surface water or~~

~~groundwater pollution [under normal climatic conditions for the location] from storm events up to and including a 25-year, 24-hour storm intensity. The specialist may confer with NRCS, conservation district staff or others with expertise with nutrient runoff control. This review shall be documented in the plan and shall identify those conditions and areas where nutrients directly discharge, or have the potential to directly discharge, into surface water as a result of a storm event up to and including a 25-year, 24-hour storm intensity, due to inadequate manure management practices. For purposes of this review, direct discharges are any flows of stormwater contaminated with manure to surface waters without prior filtration or other treatment, such as grassed filter strips. Practices to be evaluated in this review include manure handling, collection, barnyard runoff control[,] and storage [and spreading] practices. Examples of inadequate manure management practices include the following:~~

- ~~(1) Manure, contaminated water or nutrients leaving manure storage or animal concentration areas, and discharging into surface water or groundwater.~~
- ~~(2) The uncontrolled flow of storm water into, or across, manure storage facilities, [temporary] manure stacking areas [and] or animal concentration areas.~~
- ~~(3) Manure storage facilities overflowing or maintained at levels above design full levels.~~
- ~~(4) Manure storage facilities that are sized for less than the projected manure accumulation based on the expected application periods used in the plan.~~
- ~~(5) Leaking or unstable manure storage facilities.~~

~~(6) Manure storage facilities which otherwise do not comply with § 91.36 (relating to pollution control and prevention at agricultural operations), the *Manure Management Manual* and the *Pennsylvania Technical Guide*.~~

~~(b) The plan shall address any existing inadequate manure management practices as follows:~~

~~(1) As part of a plan certification under § 83.261(g), the nutrient management specialist shall [assure] ensure that the review required under subsection (a) was undertaken in the preparation of the plan.~~

~~(2) The plan [will] shall contain a listing of inadequate manure management practices and related conditions and problem areas, and the [those] BMPs [that are necessary] planned to correct them in order to [identified water contamination sources and] protect surface water and groundwater.~~

~~(c) [During the implementation of the approved plan, t]The BMPs shall be selected, designed, constructed and maintained to meet the specifications contained in the *Manure Management Manual* and the *Pennsylvania Technical Guide*.~~

~~(d) The plan submitted for approval is not required to include BMP designs. During the implementation of the approved plan, the operator is responsible for obtaining the necessary BMP designs and associated Operation and Maintenance Plans to implement the BMPs listed in the approved plan. The BMP designs and associated Operation and Maintenance Plans shall be kept on record by the operator as a supplement to the plan.~~

~~(e) Animal concentration areas shall be sized, located, implemented, and managed to eliminate the direct discharge of polluted storm water from these areas to surface water~~

and groundwater, as described in the *Manure Management Manual* and the *Pennsylvania Technical Guide*, including the following requirements which shall be addressed in the plan:

(1) The size of animal concentration areas shall be minimized.

(2) These areas shall be located as to eliminate the direct discharge of polluted storm water from a storm event of up to and including a 25-year 24-hour storm intensity, except as allowed in subsection (5):

(3) Accumulated manure on non-vegetated animal concentration areas shall be collected and land-applied to cropland, or exported from the operation, as described in the plan:

(4) These areas will be managed so as to minimize the amount of clean water entering the animal concentration area:

(5) Polluted storm water from these areas will be managed and properly applied, stored or treated through an appropriate vegetative area or other suitable treatment process, which shall meet the requirements of this Subchapter and the *Pennsylvania Technical Guide*, in order to eliminate the direct discharge of polluted storm water to surface waters or groundwater:

(6) Animal access to surface water in these areas shall be controlled:

{(c)}(f) The following BMPs, as appropriate, [may be] shall be used if necessary, and shall be described in the plan, to protect water quality by controlling storm water in the [and to control water in] farmstead, including the manure storage and animal concentration areas:

~~(1) Manure storage facilities including permanent manure stacking areas. The construction of manure storage facilities is not required unless necessary to protect surface water and groundwater as part of an integrated nutrient management system. Nutrient management plans that require the construction of a manure storage facility shall describe the planned type, dimensions and capacity of the proposed facility, and the location of the proposed facility shall be identified on a plan map.~~

~~(2) [Adequate collection of manure from animal concentration areas for utilization on cropland or for other acceptable uses.] Diversion of clean water from manure storage facilities and animal concentration areas, unless required for proper operation of an integrated nutrient management system.~~

~~(3) [Diversion of contaminated runoff within animal concentration areas to a storage, lagoon, collection basin, vegetated filter area, or another suitable site or facility] Treatment or storage of storm water contaminated through contact with manure in the manure storage or animal concentration areas.~~

~~{(4) Diversion or elimination of contaminated water sources unless required for proper operation of the manure management system.}~~

~~{(5)} ~~(4)~~ Temporary manure stacking areas, if they are located outside of concentrated water flow areas and areas where manure application is restricted or prohibited based on § 83.404{(5)} (c) (relating to nutrient application procedures).~~

~~{(6)} ~~(5)~~ Other appropriate BMPs acceptable to the Commission, including those described in the *Manure Management Manual* and the *Pennsylvania Technical Guide*.~~

~~[(d)] (g) When temporary manure stacking areas may be necessary for the implementation of the plan, the plan shall identify those areas available for the storage of manure due to unforeseen circumstances such as adverse weather conditions. Manure shall be removed from temporary stacking areas for utilization on cropland or other acceptable uses as soon as feasible.~~

~~[(e)] (h) Information contained in other sections of the plan may be used by the specialist when addressing this section.~~

~~[(f)] (i) The siting, design and installation of manure storage facilities shall meet the requirements in § 83.461 (relating to minimum standards for the design, construction, location, operation, maintenance and removal from service of manure storage facilities) [and] the *Manure Management Manual* and the *Pennsylvania Technical Guide*, as they relate to water quality protection.~~

~~(j) If alternative manure technology practices and equipment are planned to address nutrient management issues related to the operation, the rationale for and expected benefit of the planned alternative practices and equipment shall be described in the plan.~~

§ 83.422. Site specific emergency response plans

~~**(a) VAOs shall develop and implement a written site specific emergency response plan addressing actions to be taken in the event of a discharge, leak or spill of materials containing manure. A copy of the plan shall be kept onsite at the operation. The emergency response plan shall contain information necessary to meet the notification requirements for reporting discharge, leak or spill events which would result in pollution**~~

~~or create a danger of pollution to surface water or groundwater contained in § 91.33~~

~~(relating to incidents causing or threatening pollution):~~

~~(b) In the case of a discharge, leak or spill of materials containing manure related to the operation, the operator shall implement the emergency response plan developed for the operation. The operator shall comply with all notification and reporting requirements.~~

~~(c) The nutrient management plan shall contain a verification from a certified planner that an adequate written site-specific emergency response plan meeting the requirements of this section exists for the VAO.~~

~~(d) It is recommended that the operator provide a copy of the emergency response plan to the local emergency management agency that would assist during a major discharge, leak or spill event.~~

~~(e) A BMP-specific contingency plan as required by § 83.461 (relating to minimum standards for the design, construction, location, operation, maintenance and removal from service of manure storage facilities) shall be included as an addendum to the emergency response plan.~~

**STORMWATER [RUNOFF] CONTROL FOR
[VOLUNTEER OR FINANCIAL ASSISTANCE] VAO PLANS**

§ 83.431. Stormwater [runoff] control.

~~[(a) [Field runoff control.]~~

~~[1] (a) In the preparation of a plan, the nutrient management specialist⁵ or specialist in conjunction with other individuals with nutrient runoff control expertise such as NRCS or~~

~~conservation district personnel,] shall conduct a review of the adequacy of existing [runoff] stormwater control practices on [fields,] croplands, haylands and pastures included in the plan to prevent surface and groundwater pollution. The specialist may confer with NRCS, conservation district staff or others with expertise with nutrient runoff control. This review shall be included in the plan and shall identify [those] critical runoff problem areas [where nutrients directly discharge into surface water or groundwater].~~

~~{(2)} (b) The plan shall contain a list of specific [runoff] stormwater control BMPs to address those critical runoff problem areas identified in the review required under [paragraph (1)] subsection (a). This list of [runoff] stormwater control BMPs [may] shall not be in conflict with other relevant plans developed for the operation, such as a current [c]Conservation [p]Plan, [developed for the operation,] unless otherwise [justified in writing by the planner to] approved by the Commission or delegated conservation district.~~

~~{(3)} (c) The plan submitted for approval is not required to include BMP designs. During the implementation of the approved plan, the operator is responsible for obtaining the necessary BMP designs and associated Operation and Maintenance Plans to implement the BMPs listed in the approved plan, and these BMP designs and associated Operation and Maintenance Plans shall be kept on record by the operator as a supplement to the plan.~~

~~{(4)} (d) BMPs listed in the plan to address critical runoff problem areas shall be selected, designed, installed, operated and maintained in accordance with the practices and standards contained in the *Manure Management Manual* and the *Pennsylvania Technical Guide*.~~

~~{(5)} (e) The plan shall include a verification from the specialist developing the plan, indicating that a current Erosion and Sediment Control Plan, meeting the requirements of Chapter 102 (relating to erosion and sediment control), exists for all plowed or tilled croplands included in the plan. A current Conservation Plan may be used to meet this requirement, as allowed by Chapter 102. [Although an] The [c]Erosion and [s]Sediment[ation] [c]Control [p]Plan [, meeting the requirements of Chapter 102 (relating to erosion and sediment control),] is not required to be submitted as part of a nutrient management plan [under the act, meeting]. Compliance with the requirements of this section will not eliminate the operator's responsibility to comply with Chapter 102 or other relevant State laws or regulations relating to the control of erosion and sedimentation from [earth moving] construction activities [such as agricultural plowing and tilling].~~

~~{(6)f} For areas on land rented or leased [land] by the operator that have been identified as critical runoff problem areas which will require the installation of BMPs requiring construction activities, the operator shall do one of the following:~~

~~(i) Implement the listed BMP.~~

~~(ii) Enter into an agreement with the landowner requiring the landowner to implement the BMP.~~

~~{(b)} Animal concentration areas.~~

~~(1) The plan shall address stormwater runoff controls in animal concentration areas in a manner that meets the provisions of § 83.421(a) — (c) (relating to manure management).~~

~~(2) Runoff controls in animal concentration areas shall be designed, installed, operated and maintained in accordance with the standards contained in the *Pennsylvania Technical Guide*.~~

~~(3) The plan submitted for approval is not required to include BMP designs. During the implementation of the approved plan, the operator is responsible for obtaining the necessary BMP designs to implement the BMPs listed in the approved plan, and these BMP designs shall be kept on record by the operator as a supplement to the plan.~~

**~~IMPLEMENTATION SCHEDULE FOR [VOLUNTEER
OR FINANCIAL ASSISTANCE] VAO PLANS~~**

~~§ 83.441. Implementation schedule.~~

~~A plan or plan amendment shall contain a reasonable implementation schedule. The schedule shall identify when the necessary capital improvements and management changes will be made.~~

**~~RECORDKEEPING AND INFORMATIONAL REQUIREMENTS FOR
[VOLUNTEERS] VAOs~~**

~~§ 83.451. General recordkeeping requirements.~~

~~Unless otherwise specified, records required under this subchapter are not required to be submitted to the Commission or a delegated conservation district, but shall be retained by the agricultural operation [complying with the act], for at least 3 years.~~

~~§ 83.452. Recordkeeping relating to application of nutrients.~~

~~(a) An approved plan [voluntarily] developed for [agricultural operations seeking the limited liability protection under § 83.206 (relating to limitation of liability)] a VAO shall, at a minimum, be supported by the information required in [this section and] § 83.453 (relating to alternative manure utilization recordkeeping) and § 83.454 (relating to exported manure information packets).~~

~~(b) The operator of [an agricultural operation that develops a plan under the act] a VAO shall keep the following accurate records of the land application of nutrients, crop yields and soil tests on the agricultural operation.~~

~~(1) Records of soil testing results shall be maintained consistent with [§ 83.401(c)] § 83.402(c) (relating to determination of [available nutrients] nutrients needed for crop production). Soil testing is required once every 3 years for each crop management unit.~~

~~(2) Records of manure testing results and testing of other nutrient sources shall be maintained consistent with § 83.401[(b)(3)] (relating to determination of available nutrients). Manure testing is required once every year for each manure group.~~

~~(3) Land application of nutrients on [an agricultural operation] a VAO shall be documented on an annual basis by recording the following information for each source of nutrients:~~

~~(i) The locations and number of acres of nutrient application.~~

~~(ii) The [months] dates of nutrient application.~~

~~(iii) The rate of nutrient application for each [field or] crop [group] management unit.~~

~~(vi) The number of animals on pasture, the number of days on pasture and the average number of hours per day on pasture.~~

~~(4) Approximate annual crop yield levels for each crop [group] management unit shall be recorded.~~

~~(5) Annual manure production figures for each manure group [calculated consistent with procedures in § 83.401(b)(2) shall be recorded].~~

~~§ 83.453. Alternative manure utilization recordkeeping.~~

~~{(a) Recordkeeping for manure transfers. When manure is exported from an operation voluntarily complying with the act, records shall be kept which indicate the amount of manure exported, when it was exported and to whom it was exported.~~

~~(b) Recordkeeping for alternative manure utilization by means other than manure transfer. Operators shall keep annual records of the amount of manure utilized in any manner other than through manure transfers.]~~

~~(a) Recordkeeping for manure exports. The following recordkeeping requirements apply to manure exported off of the VAO:~~

- ~~(1) A manure export sheet shall be used for all manure transfers from VAOs.~~
- ~~(2) The Commission or delegated conservation district will make copies of the manure export sheet forms available to VAOs.~~

~~(3) Computer-generated forms other than the manure export sheet forms provided by the Commission may be used if they contain the same information as, and are reasonably similar in format to, the forms provided by the Commission.~~

~~(4) Recordkeeping related to the application of exported manure shall comply with the following:~~

~~(i) The exporter is responsible for the completion of the manure export sheet, providing a copy to the importer and retaining a copy at the exporting operation.~~

~~(ii) When the exporter, or person working under the direction of the exporter such as an employee or a manure hauler/applicator, applies the manure to the land, the exporter is responsible for maintaining records of the actual application dates, application areas (including the observation of any relevant setback restrictions), application methods, and application rates for the exported manure.~~

~~(iii) When the manure is exported through a broker, the exporting VAO is not responsible for obtaining records of actual application information for importing operations, unless the exporting operator manages the application of the manure. The broker shall retain records of the application of all manure (including date, areas, methods, and rates applied) and shall provide a copy of these application records to the importing site for their records.~~

~~(b) Recordkeeping for alternative manure utilization by means other than manure export. Operators shall keep annual records of the amount and use of manure utilized in any manner other than through manure transfers.~~

§ 83.454. Exported manure informational packets:

(a) If manure is exported from a CAO, the exporter will provide the importer and any relevant manure hauler/applicators or brokers with a completed manure export sheet.

(b) If the manure is to be land applied, the exporter is required to provide the following information to the importer or broker, as supplied by the Commission or its delegated agent:

(1) The applicable sections of the *Manure Management Manual*.

(2) A concise educational publication describing the key concepts of nutrient management.

(3) Additional informational items as supplied by the Commission for this purpose.

(c) The Commission or its delegated agent will provide the materials in subsection (b) for distribution by the exporter. The exporter is only required to provide those items in subsection (b) that have been made available to the exporter by the Commission or its delegated agent.

(d) The exporter is responsible for providing the informational materials described in subsection (b) only if the importer, hauler/applicator or broker does not already have a current copy of the informational materials.

**MINIMUM STANDARDS FOR MANURE STORAGE
FACILITIES ON ~~[VOLUNTEER OR FINANCIAL
ASSISTANCE OPERATIONS]~~ VAOs**

~~§ 83.461. Minimum standards for the design, construction, location, operation, maintenance and removal from service of manure storage facilities.~~

~~(a) The minimum standards contained in this section apply to new manure storage facilities constructed, and existing manure storage facilities expanded, as part of a plan developed for a VAO [and approved as a condition of receiving financial assistance under the act or the Chesapeake Bay Nonpoint Source Pollution Abatement Program, or developed for volunteers seeking the limited liability protection under § 83.206 (relating to limitation of liability)].~~

~~(1) Manure storage facilities shall be designed, constructed, located, operated, maintained, and, [when] if no longer used for the storage of manure, removed from service, [to prevent the pollution of] in a manner that protects surface water and groundwater quality, and prevents the offsite migration of pollution, by meeting the standards contained in the *Manure Management Manual* and the *Pennsylvania Technical Guide*, except [when] if these standards conflict with this subchapter.~~

~~(2) In addition to complying with paragraph (1), manure storage facilities shall be designed and located in accordance with the following criteria:~~

~~(i) Facilities shall comply with the applicable criteria in § 91.36 (relating to pollution control and prevention at agricultural operations).~~

~~(ii) Facilities shall comply with the applicable criteria in Chapter 105 (relating to dam safety and waterway management).~~

~~{(ii)} (iii) The location and construction of facilities to be placed within a floodplain shall be consistent with local ordinances developed under the Pennsylvania Flood Plain Management Act (32 P. S. §§ 679.101—679.601), which relates to the dangers and damage of floodwaters.~~

~~{(iii)} (iv) The sides of facilities located in a floodplain shall be protected from erosion and scouring from a 25 year flood event.~~

~~{(iv)} (v) For [agricultural operations] VAOs that were producing livestock or poultry on or before October 1, 1997, facilities, except reception pits and transfer pipes, may not be constructed:~~

~~(A) Within 100 feet of a perennial stream, river, spring, lake, pond or reservoir.~~

~~(B) Within 100 feet of a private water well, or open sinkhole.~~

~~(C) Within 100 feet of an active public drinking water well, unless other State or Federal laws or regulations require a greater isolation distance.~~

~~(D) Within 100 feet of an active public drinking water source surface intake, unless other State or Federal laws or regulations require a greater isolation distance.~~

~~(E) Within 100 feet of a property line, unless the landowners within the 100 feet distance from the facility otherwise agree and execute a waiver in a form acceptable to the Commission.~~

~~(F) Within 200 feet of a perennial stream, river, spring, lake, pond, reservoir or any water well [where these facilities] if a facility (except permanent stacking and compost~~

~~facilities) [are] is located on slopes exceeding 8% or a facility has [have] a capacity of 1.5 million gallons or greater.~~

~~(G) Within 200 feet of a property line, [where these facilities] if a facility (except permanent stacking and compost facilities) [are] is located on slopes exceeding 8% [where] and if the slope is toward the property line, or a facility has [have] a capacity of 1.5 million gallons or greater, unless the landowners within the 200 foot distance from the facility otherwise agree and execute a waiver in a form acceptable to the Commission.~~

~~{(v)} (vi) For [agricultural operations on] VAOs agricultural operations that come into existence after October 1, 1997, facilities, except reception pits and transfer pipes, may not be constructed:~~

~~(A) Within 100 feet of a perennial stream, river, spring, lake, pond or reservoir.~~

~~(B) Within 100 feet of a private water well, or open sinkhole.~~

~~(C) Within 100 feet of an active public drinking water well, unless other State or Federal laws or regulations require a greater isolation distance.~~

~~(D) Within 100 feet of an active public drinking water source surface intake, unless other State or Federal laws or regulations require a greater isolation distance.~~

~~(E) Within 200 feet of a property line, unless the landowners within the 200 foot distance from the facility otherwise agree and execute a waiver in a form acceptable to the Commission.~~

~~(F) Within 200 feet of a perennial stream, river, spring, lake, pond, reservoir or any water well [where these facilities] if a facility (except permanent stacking and compost~~

~~facilities) [are] is located on slopes exceeding 8% or [have] has a capacity of 1.5 million gallons or greater.~~

~~(G) Within 300 feet of a property line, [where these facilities] if a facility (except permanent stacking and compost facilities) [are] is located on slopes exceeding 8%, [where] and if the slope is toward the property line, or a facility has [have] a capacity of 1.5 million gallons or greater, unless the landowners within the 300 foot distance from the facility otherwise agree and execute a waiver in a form acceptable to the Commission.~~

~~{(vi)} {(vii)} The Commission or a delegated conservation district may waive the distance restrictions in subparagraphs {(iv)} {(v)}(A), (B) and (F) {(E)}—(G)}, if the following can be demonstrated to the satisfaction of the Commission or a delegated conservation district:~~

~~(A) The siting restrictions contained in subparagraph {(iv)} {(v)} would make the placement economically unreasonable or physically impractical.~~

~~(B) A site investigation—including consultation with affected landowners—has been conducted which demonstrates that the proposed system will protect water quality and protect against offsite migration of nutrients.~~

~~(C) The type, design and contingency plan developed for the facilities meet additional criteria the Commission or delegated conservation district, in consultation with the NRCS, may require to protect water quality, and protect against offsite migration of nutrients.~~

~~(D) In the case of a private water well, the well construction meets the criteria that the Commission, in consultation with the NRCS, deems necessary to protect water~~

~~quality. There will be no waivers granted from the setback requirements for public water wells or sources.~~

~~(3) The designer of the manure storage facility [required by] described in the plan shall address the following:~~

~~(i) Verification of the minimum manure storage period and minimum manure storage volume documented in the current plan.~~

~~(ii) Determination of the type and dimensions of facilities considering the environmental and space limitations of the site, as well as the operator's preference.~~

~~(iii) An onsite investigation to evaluate the site suitability for a facility in accordance with the standards in the Manure Management Manual and the Pennsylvania Technical Guide.~~

~~(b) The repair of an existing manure storage facility that is part of a plan developed for a VAO under the act shall comply with applicable standards in the Manure Management Manual and the Pennsylvania Technical Guide. The location standards do not apply to these facility repairs.~~

~~(c) The site specific design for the construction, expansion or major repair of a liquid or semisolid manure storage facility covered under the act shall be done or approved by an engineer registered in this Commonwealth. The engineer shall certify that the design complies with the applicable design standards described in the Manure Management Manual and the Pennsylvania Technical Guide. 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 criteria established in the *Manure Management Manual* and the *Pennsylvania Technical Guide*, has been completed, and that any applicable setback requirements have been met. 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 and construction standards.~~

~~(d) A written site specific contingency plan, developed in accordance with the standards contained in the *Pennsylvania Technical Guide*, addressing actions to be taken in the event of a manure leak or spill from a manure storage facility covered under the act, shall be developed and kept onsite at the operation. In the case of a leak or spill of manure from a manure storage facility covered under the act, the operator is responsible for implementation of the site specific contingency plan developed for the operation. The contingency plan shall contain information necessary to meet the notification requirements for reporting leak or spill events which would result in pollution or create a danger of pollution to surface water or groundwater contained in [§ 101.2(a)] § 91.33 (relating to incidents causing or threatening pollution).~~

~~(e) It is recommended that the operator provide a copy of the contingency plan to the local emergency management agency that would assist during a major leak or spill event.~~

~~PLAN REVIEW AND IMPLEMENTATION FOR [VOLUNTEERS
OR FINANCIAL ASSISTANCE RECIPIENTS] VAOs~~

~~§ 83.471. Initial plan review and approval.~~

~~(a) Plans or plan amendments for [agricultural operations other than CAOs] VAOs may be submitted for initial review and approval to delegated conservation districts or alternatively to the Commission for agricultural operations located in counties not delegated administrative authority under § 83.241 (relating to delegation to local agencies). A person performing the plan review shall be certified in accordance with the Department of Agriculture's nutrient management specialist certification requirements in 7 Pa. Code § 130b.1—130b.51 (relating to nutrient management certification).~~

~~(b) A plan or plan amendment [voluntarily] developed for [an agricultural operation other than a CAO] a VAO and submitted to the Commission or delegated conservation district shall be deemed approved unless disapproved by the Commission or conservation district within 90 days of receipt of a complete plan or plan amendment. The notice of determination to [modify or] disapprove a plan or plan amendment shall be provided in writing to the operator submitting the [same] plan or plan amendment and shall include an explanation specifically stating the reasons for [modification or] disapproval. The Commission or delegated conservation district shall, within 10 days from the date of receipt of the plan or plan amendment, provide notice to the operator indicating whether all of the required plan elements have been received [any missing or incomplete elements of the plan submission].~~

~~(c) Approvals shall be granted only for those plans or plan amendments that satisfy the requirements of [the act and] this subchapter.~~

§ 83.472. Plan implementation.

~~(a) Plans developed and approved for [non-CAOs] VAOs [as a condition for receiving financial assistance under the act or the Chesapeake Bay Nonpoint Source Pollution Abatement Program, or for volunteers seeking the limited liability protection under § 83.206 (relating to limitation of liability),] shall be implemented in accordance with the implementation schedule contained in the plan as agreed upon by the operator and the Commission or a delegated conservation district.~~

~~(b) [Whatever adjustments are made in the implementation of the approved plan, the n] Nutrient application rates shall be [balanced] developed as described in § 83.403 (relating to determination of nutrient application rates) and shall be implemented upon approval of the plan or plan amendment, as applicable. The [owner,] operator [or nutrient management specialist] shall review the approved plan at least annually to ensure that this condition is met.~~

~~(c) At least every 3 years, the approved plan shall be reviewed by a commercially or individually certified nutrient management specialist. If the agricultural operation is still consistent with the approved plan and the nutrient content and soil test values used in the~~

~~plan have not significantly changed, and the accepted reference factors used in the plan have not changed since approval, the specialist shall provide notice of this to the reviewing agency. A plan amendment shall be submitted to the reviewing agency in accordance with § 83.471(a) (relating to initial plan review and approval), if the agricultural operation has changed from that described in the approved plan [(see) , as required by § 83.481 (relating to plan amendments)]].~~

~~(d) Limited liability protection, as described in § 83.206 (relating to limitation of liability), is afforded to those operators properly implementing an approved plan under the regulations.~~

~~PLAN AMENDMENTS AND TRANSFERS FOR [VOLUNTEERS
AND FINANCIAL ASSISTANCE RECIPIENTS] VAOs~~

~~§ 83.481. Plan amendments.~~

~~(a) [For plans approved for non-CAOs as a condition for receiving financial assistance under the act or the Chesapeake Bay Nonpoint Source Pollution Abatement Program, or for volunteers seeking the limited liability protection under § 83.206 (relating to limitation of liability) a] A plan amendment is required [when] if the operator of [an agricultural operation] a VAO expects to make significant changes in the management of nutrients from those contained in the approved plan. Those significant changes in the management of nutrients which would require a plan amendment are [as follows] any one of the following:~~

- ~~(1) A net increase of greater than 10% occurs in AEU's per acre.~~

~~(2) A change in crop management that results in a reduction of greater than 20% in nitrogen necessary for realistic expected crop yields or the amount the crops will utilize for an individual crop year.~~

~~(3) [When] If calculations in the plan as originally submitted are in error, or if figures used in the plan are inconsistent with those contained in the *Pennsylvania Agronomy Guide* and associated fact sheets and manuals [the *Manure Management Manual*], and adequate written justification has not been given for the inconsistency.~~

~~(4) [When] If a BMP different [BMP] than that called for in the approved plan is proposed to address a manure management or stormwater management concern.~~

~~(5) [When] If, after the first 3 years of implementing the plan, actual yields are less than 80% of the expected crop yields used in the development of the plan.~~

~~(6) [When] If an operation changes from a [non-CAO] VAO status to a CAO[, and the original plan needs to be updated to include those items required of only CAO plans].~~

~~(7) A change in excess manure utilization arrangements as described in the approved plan. No amendment is required to address the loss of an importer if the loss does not impair the operator's ability to properly manage the manure generated on the operation.~~

~~(8) If alternative organic nutrient sources will replace or augment nutrient sources described in the plan.~~

~~(9) If additional lands are brought into the operation through purchase, lease or renting.~~

~~(10) If there is a change in the manure management system that is expected to result in a significant change in the manure nutrient content.~~

~~(b) A plan amendment, as required in subsection (a), shall be developed and certified by a nutrient management specialist and shall be submitted to the reviewing agency in accordance with § 83.471(a) (relating to initial plan review and approval).~~

~~(c) Plan updates to address operational or computation changes other than those described in subsection (a) shall be developed and certified by a commercial or individual nutrient management specialist and retained at the operation and submitted to the district for inclusion in the approved nutrient management plan.~~

~~§ 83.482. Amendments due to unforeseen circumstances.~~

~~Changes in the implementation of approved plans due to unforeseen circumstances shall be certified by a nutrient management specialist as meeting applicable requirements of this subchapter and submitted to the district within 30 days of implementation. The amendments called for under this subsection will not require the review and approval of the Commission or delegated conservation district, but shall temporarily become part of the plan until normal operations are resumed. Unforeseen circumstances shall include the following:~~

- ~~(1) Outbreak of contagious disease. Manure management shall be consistent with the procedures in § 83.491 (relating to manure management in emergency situations).~~
- ~~(2) Failures or malfunctions of equipment or storage that require a change in manure handling procedures.~~
- ~~(3) Other unforeseen circumstances that cause a significant change in the management of nutrients on the agricultural operation, such as:~~

~~(i) Unforeseen weather conditions which significantly impact plan implementation, or crop failure due to adverse weather conditions.~~

~~(ii) Unanticipated loss of rented land that would create a reduction of greater than 20% of the nitrogen necessary for expected crop yields.~~

~~§ 83.483. Plan transfers.~~

~~(a) An approved plan may be transferred to a subsequent owner or operator of an agricultural operation by notification of the transfer to the Commission or a delegated conservation district, unless the transfer results in operational changes requiring plan amendment under § 83.481 (relating to plan amendments).~~

~~(b) If the transfer of the approved plan results in operational changes requiring plan amendment under § 83.481, the plan amendments shall be submitted for approval of the Commission or a delegated conservation district along with, or before, the notification required under subsection (a).~~

~~CONTAGIOUS DISEASE EMERGENCIES ON [VOLUNTEER OR FINANCIAL
ASSISTANCE OPERATIONS] VAOs~~

~~§ 83.491. Manure management in emergency situations.~~

~~(a) If there is an outbreak of a contagious disease as regulated by the Department of Agriculture, manure management shall be consistent with requirements in the Department~~

~~of Agriculture's order of quarantine issued under the Domestic Animal Act (3 P. S. §§ 311—354) and regulations thereunder.~~

~~(b) The Department of Agriculture will notify the Commission when a quarantine is imposed on an agricultural operation covered by the act. The Department of Agriculture will supply the Commission and delegated conservation district with a copy of the quarantine document.~~

~~(c) Unless otherwise directed by the quarantine, [those volunteers receiving financial assistance under the act or the Chesapeake Bay Nonpoint Source Pollution Abatement Program, or those volunteers seeking the limited liability protection under § 83-206 (relating to limitation of liability),] VAOs shall develop an amended plan addressing the management of manure under the quarantine. This plan shall be certified by a nutrient management specialist prior to implementation and submitted to the reviewing agency within 30 days of implementation.~~

~~(d) If nutrients are applied in excess of crop need due to the quarantine restrictions placed on the manure, and the cropping sequence permits, cover crops shall be planted to the site to minimize the loss of these nutrients. The harvesting of these cover crops is encouraged to facilitate the removal of excess nutrients.~~

~~(e) The temporary storage of manure during the quarantine shall be done in accordance to § 83.421 (relating to manure management).~~

~~(f) The application of manure during the quarantine shall be done in accordance with § 83.404[(5)] (f) (relating to nutrient application procedures).~~

~~(g) Standard soil tests will be required each year for crop [fields] management units when the implementation of the quarantine required that nutrients be applied in excess of the amount the crop can use, and continue for 3 successive years thereafter. In addition to the standard test, an appropriate test indicating the amount of nitrogen available for crop uptake shall be required for 1 year beyond the cessation of excess manure application.~~



Pennsylvania Department of Environmental Protection

Rachel Carson State Office Building

P.O. Box 2063

Harrisburg, PA 17105-2063

February 16, 2006

Policy Office

717-783-8727

Kim Kaufman, Executive Director
Independent Regulatory Review Commission
14th Floor, Harristown #2
333 Market Street
Harrisburg, PA 17120

Re: Nutrient Management Final Regulation (#7-390)

Dear Mr. Kaufman:

Pursuant to Section 5.1(a) of the Regulatory Review Act, enclosed is a copy of a final-form regulation for review by the Commission. The State Conservation Commission (SCC) approved this final-form rulemaking on January 19, 2006. This final regulation amends the current regulations at 25 Pa. Code Chapter 83, Subchapter D (relating to nutrient management). The regulations implement provisions of the act of July 6, 2005 (Act 38 of 2005)(3 Pa. C.S. §§ 501 – 522), formerly the Nutrient Management Act, 3 P.S. §§ 1701--1718.

The purpose of the regulation is to more effectively address nutrient losses from high-density animal operations, called concentrated animal operations (CAOs), as well as farms which receive manure from them. The regulation will enhance the protection of water resources which could be impacted by these intensive livestock operations. Some of these enhancements were identified at public hearings held by the House Committee on Agriculture and Rural Affairs in 2001. Others were suggested by county conservation districts, the Nutrient Management Advisory Board, the Departments of Agriculture and Environmental Protection, the USDA's Natural Resources Conservation and Agricultural Research Services, the Penn State College of Agricultural Sciences and various stakeholders.

The major revisions from the current regulation are increased controls on phosphorus losses at CAOs and their importers, and additional restrictions on the export of manure. Other notable changes include: regulation of a broader range of animal types in the program, in particular horses; verification of erosion and sediment control plans to control stormwater runoff; more frequent testing of soils and manure; additional restrictions on the application of manure during fall and winter; additional requirements on farmers proposing to temporarily stack manure in fields without protection from rainwater; and new requirements for application of large quantities of liquid manure. The regulation also contains flexibility in several areas for existing operations. These include a phase-in for the new phosphorus requirements, and a three-year delay in the erosion and sedimentation (E&S) plan



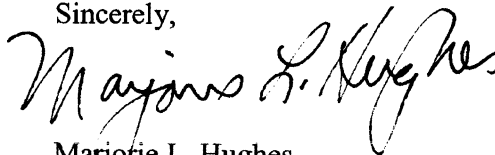
verification, for most operations. Also included are new categories of funding assistance to CAOs to help them meet the new requirements.

The SCC developed this final-form regulation in conjunction with the Nutrient Management Advisory Board, as required by Act 38. The Advisory Board, which represents a wide range of agricultural, academic, governmental, environmental, and private interests, provided extensive assistance to the SCC over the past several years in an effort to develop workable and effective revisions to the existing regulations. The development of this final-form regulation was also done with regular assistance and guidance from county conservation districts, PA Department of Agriculture, Department of Environmental Protection, the USDA Natural Resources Conservation Service, the USDA Agricultural Research Service, and the Penn State College of Agricultural Sciences. The DEP Agriculture Advisory Committee was also briefed on the regulation at its regular meetings during the finalization of the regulation.

The proposed regulations were published in the *Pennsylvania Bulletin* on August 7, 2004 with a 90-day public comment period. Comments were received from 199 commentators. These comments were considered in the development of the final-form regulation. The SCC held two public informational meetings on the proposed regulation in 2004. One meeting was held in Lancaster and the other was held in DuBois. In addition, two public hearings for the purpose of accepting comments on the proposal were subsequently held at the same locations.

The Department will provide assistance as necessary to facilitate the Commission's review of this final-form regulation under Section 5.1(e) of the Regulatory Review Act. This review is tentatively scheduled for March 23, 2006. Please contact me if you would like additional information.

Sincerely,



Marjorie L. Hughes
Regulatory Coordinator

Enclosures

**TRANSMITTAL SHEET FOR REGULATIONS SUBJECT TO THE
REGULATORY REVIEW ACT**

RECEIVED

I.D. NUMBER: 7-390

2006 FEB 16 PM 2:10

SUBJECT: State Conservation Commission: Nutrient Management

INDEPENDENT REGULATORY
REVIEW COMMISSION

AGENCY: DEPARTMENT OF ENVIRONMENTAL PROTECTION

TYPE OF REGULATION

- Proposed Regulation
- Final Regulation
- Final Regulation with Notice of Proposed Rulemaking Omitted
- 120-day Emergency Certification of the Attorney General
- 120-day Emergency Certification of the Governor
- Delivery of Tolled Regulation
 - a. With Revisions
 - b. Without Revisions

FILING OF REGULATION

DATE	SIGNATURE	DESIGNATION
2/16	<i>D Neunt</i>	HOUSE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY
2/16	<i>J Jehu</i>	
2/16	<i>MAA</i>	2/16 <i>Dante A. Carlele</i> SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY
2/16/06	<i>St. Belmont</i>	INDEPENDENT REGULATORY REVIEW COMMISSION
_____	_____	ATTORNEY GENERAL (for Final Omitted only)
_____	_____	LEGISLATIVE REFERENCE BUREAU (for Proposed only)

February 8, 2006

