State Conservation Commission Meeting

January 22, 2016

Pa Department of Agriculture, Harrisburg PA

Agenda

Orientation/Briefing Session – 10:00am; Rm. 309

1. Review of 2015 program area accomplishments and discussion on 2016 program objectives and administration.
2. Review of agenda items.

Executive Session ***(Position in meeting agenda to be determined)***

Business Session – 1:00pm; Rm 309

A. Opportunity for Public Comment

B. Business and Information Items

1. Approval of Minutes (A)
    a. November 10, 2015 Public Meeting
2. Nutrient and Odor Management Program (A)
    a. Marlin Martin OMP, Lebanon County - Karl Dymond, SCC
    b. Bar-U-Farm NMP, Harold Hauschild; CAO Monroe County - Michael Walker, SCC
    c. Mountain Creek Riding Stable, Inc. NMP, Mark Ecker; CAO Monroe County – Michael Walker, SCC
    d. Andrew Mizerak NMP; VAO Lackawanna County – Michael Walker, SCC
    e. Wright Dairy Farm; VAO Lackawanna County– Michael Walker, SCC
3. Susquehanna County Conservation District Reserve Account request to include additional funds - Johan E. Berger, SCC (A)

C. Written Reports

1. Program Reports
    a. Act 38 Delegated Conservation District Evaluation Report
    b. Act 38 Nutrient Management Program – 2015 Accomplishments
    c. Act 38 Facility Odor Management Program - Status Report on Plan Reviews
    d. Certification and Education Programs – 2015 Accomplishments
    e. REAP Program – 2015 Accomplishments
    f. Dirt Gravel, Low Volume Road Program – 2015 Accomplishments
    g. Conservation District Fund Allocation Program – 2015 Accomplishments

D. Cooperating Agency Reports

Adjournment

Next Public Meeting – February 9, 2016; Ramada Conference Center, State College PA.

'A' denotes 'Action Requested'
'NA' denotes 'No Action Requested'

STATE CONSERVATION COMMISSION MEETING
PA Dept of Agriculture, Harrisburg, PA
Tuesday, November 10, 2015 @ 1:00 p.m.

Draft Minutes

Members Present: Secretary John Quigley, DEP; Deputy Secretary Greg Hostetter for Secretary Russell Redding, PDA; Steve Taglang, Bureau of Conservation and Restoration, DEP; Ronald Rohall; Ross Orner; Ronald Kopp; Michael Flinchbaugh; Andrew Gilchrist for Secretary Cindy Adams Dunn, DCNR via conference call; Dr. Dennis Calvin, Penn State University Cooperative Extension; Glenn Seidel, President of PACD.

A. Public Input

Public comments were received during agenda item B.4.b.

B. Business and Information Items

1. Approval of Minutes

a. September 15, 2015 Public Meeting

Steve Taglang moved to approve the September 15, 2015 minutes with a correction to Secretary Quigley's name. Motion seconded by Mike Flinchbaugh. Motion carried.

b. October 13, 2015 Conference Call

Mike Flinchbaugh moved to approve the minutes of the October 13, 2015 conference call. Motion seconded by Ron Rohall. Motion carried.

2. Proposed 2016 meeting and conference call dates - Karl G. Brown, SCC (A)

Karl Brown reported that each year it is necessary to select and advertise all regularly scheduled meetings of the Commission for the next calendar year. A list of all of the proposed dates has been provided. The February and July meetings will be joint meetings with PACD.

Ron Kopp moved to approve the proposed 2016 meeting and conference call dates. Motion seconded by Ron Rohall. Motion carried.

3. Selection of 2016 Vice-Chair – Karl G. Brown, SCC (A)

Karl Brown reported that Conservation District Law requires that the Commission elect a vice chairman for the next year at their last regularly scheduled meeting of each calendar year. Ross Orner, the current chair, has not been reappointed to the Commission as his term expires November 30, 2015. Ron Rohall nominated Mike Flinchbaugh for the position of vice-chairman.

Ron Rohall moved to approve Mike Flinchbaugh as the 2016 vice-chairman. Motion seconded by Ron Kopp. Motion carried.

4. Nutrient and Odor Management Program

a. Kimberly Schlappich OMP, Berks County - Karl Dymond, SCC (A)

Karl Dymond reported that the State Conservation Commission does not currently delegate OMP approval to conservation districts. Additionally, Commission policy established where an Odor Site Index (OSI) in an OMP exceeds 100 points; the Commission must take action on the plan at a public meeting. The original plan was

approved in April of 2015. A barn had to be moved to a different location to be in compliance with a DEP NPDES permit for the operation. The relocation of the barn significantly increased the OSI for the operation prompting the inclusion of Level 2 BMPs.

Based on staff reviews, the OMP Amendment "A" for the Kimberly Schlappich operation meets the planning and implementation criteria established under the PA Nutrient & Odor Management Act and Facility Odor Management Regulations.

Mike Flinchbaugh moved to approve Kimberly Schlappich OMP. Motion seconded by Ron Rohall. Motion carried.

b. Hillandale-Bailey Farm NMP – Michael Brubaker, SCC (A)

Mike reported that the Nutrient Management Act (Act 38) requires that nutrient management plans (NMPs) must be acted upon by the Commission or a delegated county conservation district. The Hillandale-Bailey Farm NMP had previously been submitted to the York County Conservation District and approved June 11, 2015. The plan included a sizable, proposed expansion to the current operation.

On July 27, 2015 the plan was formally appealed by a citizens group, primarily concerned with the proposed expansion of the facility. Due to a public noticing issue, Hillandale-Bailey Farms withdrew the approved plan and the SCC rescinded the approval. At this point, State Conservation Commission staff offered, and the York County Conservation District agreed, to take over the review of resubmitted NMP. Commission staff worked with the operation and consultant to develop a plan for submission which was received by the Commission in final form on November 2, 2015.

Public comments

William Kluck, Esq., representing Friends of York County Family Farmers (FYCFF):

(Written comments made part of the minutes)

FYCFF is concerned that the second version of the plan is substantially different than the original version. FYCFF believes that there was not enough time to adequately review the NMP between the final form and the Commission's vote. Additional comments centered on Hillandale-Bailey Farm not having an approved Ag E&S plan (according to Act 38, the Commission cannot approve a NMP with= out an Ag E&S plan); the Land Use Plan was disapproved by Township; the status of the CAFO permit; the status of the Odor Management Plan; Who is the operator?; concerns with the planner signature dates earlier than the Importer/Broker Agreement dates; and Sole Source Aquifer notation and CBP TMDL issues with possible arsenic pollution. .

Michael Wickham, concerned York Citizen: (Written Comments handed out and made part of these minutes):

Most of the citizens that live in the area surrounding the farm use well water. The citizens are concerned about the impact of the egg wash water and manure on their wells and the sole source aquifer. Heavy metals, including arsenic, have been found at the other Hillandale farms, resulting in insufficient fines. The plan, as submitted, does not have a leak detection system for the egg wash water lagoons. The citizens would like more time for a further examination of the NMP.

Mike Brubaker, responding to public comments:

A written comment/response document was made available dealing with the written comments that the SCC received during the plan review. That written comment/response document is made part of these minutes. A completed review of the farm with a site visit was completed on October 6, 2015. The new construction is away from any neighboring water sources. Hillandale-Bailey Farms worked with multiple planners, Corey Grove of TeamAg, the Department of Environmental Protection, York County Conservation District, Maryland Department of Agriculture and the site owner, Jim Bailey. According to Act 38, this plan meets all of the requirements.

Mike Flinchbaugh moved to approve the Hillandale-Bailey Farms Nutrient Management Plan. Motion seconded by Ron Rohall. Motion carried.

5. Conservation District Fund Allocation Program – Karl G. Brown, SCC (A)

a. Proposal for distribution of FY 2015-16 allocated funds

Karl reported that at the July 8, 2015 public meeting, the State Conservation Commission adopted a strategy for allocation of funds under the Conservation District Fund Allocation Program (CDFAP) Statement of Policy contingent on the enactment of FY2015-16 state budget. Due to the 2015-16 budget impasse, allocated funds have not been released to the conservation districts. PACD President Glenn Seidel wrote to Secretary Redding and Secretary Quigley asking for a release of funds that are already in the Conservation District Fund. Commission staff, the Governor's Budget Office and the Governor's Policy Office worked together to determine the feasibility of releasing a portion or all of the UGW funds. Commission staff recently received confirmation from the Budget Office and Policy Office to move forward in distributing the funds.

Karl reviewed a proposal to release $3.375 million in UGW funds for District Manager, First Technician, and ACT Technician positions and release funds for several special projects: ACT Boot Camp ($20,000), Ombudsman Program ($95,000), and the Leadership Development Program ($60,000). The proposal also included provisions to distribute appropriated funds when a state budget is enacted.

Ron Rohall moved to approve the revised distribution of FY 2015-16 allocated funds currently available. Motion seconded by Mike Flinchbaugh. Motion carried.

b. CDFAP Statement of Policy and Related Issues

Karl reported that in August 2015, the Governor's Policy Office called a meeting with Commission, DEP and PDA staff to discuss the purpose and intent of the CDFAP, how the CDFAP resources are currently being allocated to and used by conservation districts, and the feasibility of directing a greater portion of these funds toward agricultural BMP implementation, especially within the Chesapeake Bay Watershed. Commission and agency staff agreed to develop and evaluate a number of options for how a portion of the CDFAP resources could be utilized directly for agricultural BMP implementation by county conservation districts.

Public comments

(Written comments made part of the minutes)

Dave Rupert, Armstrong County Conservation District Director

Dave thanked Commission staff for their continued support. $175,000 of CDFAP and UGW funds are used to pay for Armstrong Conservation District's six full time employees. If the new calculations were to be implemented, $17,500 per year would be lost to Armstrong and smaller independent districts.

Bill McFadden, Lehigh County Conservation District Director

Bill stated that the changes to the distribution of the CDFAP would hurt Lehigh and other smaller districts that rely on these funds to pay for employees.

Ron Kopp, SCC member

Ron Kopp stated that he is concerned that this proposal would begin to divert funding from the original intent of the Conservation District Allocation Funding Program.

Mike Flinchbaugh, SCC member

Mike stated that this proposed diversion of funds is going to limit staff support for existing programs.

Ron Rohall, SCC member

Ron Rohall commented that the Commission should be focusing on the larger picture and extending the potential use of the funds for non-point source uses across the state.

Ron Rohall moved to approve the proposed short term recommendations and establish an advisory committee to review and develop the recommended short-term and long-term apportions. Motion seconded by Dennis Calvin. Motion carried.

6. RCPP Update and Commitments - Karl G. Brown, SCC (A)

Karl reported that USDA NRCS released its 2016 funding announcement for the Regional Conservation Partnership Program (RCPP) earlier this year. Through RCPP, NRCS seeks cost effective approaches to benefit farming, ranching, forest operations, local economies and resources in a watershed or other geographic area. At the direction of the Governor's Policy Office, the Department of Agriculture assembled a partner team that has been working closely and cooperatively to develop a proposal to deliver an innovative RCPP approach to small watersheds in Lancaster and York counties. This approach would strive to bring new participants into agreements with NRCS (anticipating in 100% participation of farmers in the targeted areas) and provide heightened stream protection. A pre-proposal titled 'Pa Adaptive Toolbox for Conservation Saturation' was submitted in early July 2015 by the Department of Agriculture to NRCS which was subsequently approved for submission of a final proposal. The partners recently completed a draft of the final proposal outlining the roles and the significant financial contributions of the partners, and strategies for completion of the RCCP proposal goals and objectives. Karl recommended that up to $100,000 from the Nutrient Management Fund would be available for conservation district technical assistance in the RCPP project in FY 2016.

Ron Kopp moved to approve a commitment of $100,000 from the nutrient management fund to the RCPP project in FY 2016. Motion seconded by Mike Flinchbaugh. Motion carried.

7. Update on Conservation District Building Projects (NA)

Due to time constraints, the reports from Tioga and Susquehanna counties will be moved to a future meeting.

8. Chesapeake Bay Program (NA)

a. Chesapeake Bay 'Reboot' - Sec. John Quigley, DEP

Secretary Quigley reported that discussions are still occurring on the challenges that Pennsylvania faces in regards to meeting Chesapeake Bay nutrient reduction goals. Meeting these reduction goals will be challenging and will require a comprehensive and balanced approach. Between 2015 and 2025, Pennsylvania would need an estimated $378 million a year to meet the requirements set forth by EPA. DEP and PDA are working together with conservation districts and other stakeholders to help achieve these goals.

b. BMP Farmer Self-reporting Initiative - Steven W. Taglang, DEP

Steve reported that Pennsylvania is committed to achieve a Chesapeake Bay partnership goal of 60% reduction in nitrogen, phosphorus, and sulfur by 2017. EPA has expressed concerns that Pennsylvania is not meeting these commitments and indicated that PA needs to place additional emphasis on agriculture and urban sectors to meet these commitments.

9. HPAI Update – Deputy Secretary Greg Hostetter, PDA

Deputy Hostetter reported that no new cases have been reported since June. PDA is promoting biosecurity at various meetings throughout the region. Meetings with the dairy industry have occurred to discuss farms with multiple species. EPA met with PDA to discuss landfills that would receive birds. PEMA continues to discuss various scenarios. Mushroom farmers have been on alert since many of them rely on chicken manure for their operations. Trainings and meetings will continue into the future weeks.

C. Cooperating Agency & Organization Reports

Drew Gilchrist, DCNR
Drew reported that DCNR is working on partnership grants. Until the budget impasse is resolved, grant money is waiting to be released for various projects.

Steve Taglang, DEP
Nothing to report.

Glenn Seidel, PACD
Glenn reported that funding remains an issue for staff.

Dennis Calvin, PSU
Dennis reported that 14 new extension positions will be created throughout the state. PSU is focusing on water quality issues.

Deputy Secretary Greg Hostetter, PDA
Nothing to report.

Denise Brinley, DCED
Nothing to report.

C. Written Reports

1. Program Reports
    a. Act 38 Nutrient Management Program
    b. Act 38 Facility Odor Management Program - Status Report on Plan Reviews
    c. Certification and Education Programs
    d. REAP Program
    e. Dirt Gravel, Low Volume Road Program
2. Ombudsman Program Reports – Southern Allegheny Region (Blair County Conservation District and Lancaster County Conservation District

F. Adjournment

Ross Orner thanked everyone for allowing him to serve on the Commission for the past twenty-one (21) years.

Motion to adjourn was made by Mike Flinchbaugh. Motion seconded by Ron Kopp. Meeting adjourned at 3:40 p.m.

The next SCC public meeting is scheduled for a public meeting on January 22, 2016; 1:00 p.m. at the Pa Department of Agriculture, Harrisburg PA.

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: December 21, 2015

TO: Members
State Conservation Commission

FROM: Karl J. Dymond, Coordinator
State Conservation Commiss

THROUGH: Karl G. Brown, Executive Secretary
State Conservation Commission

SUBJECT: Odor Management Plan Review
Marlin Martin, Lebanon County

Action Requested

Action is requested on the Marlin Martin odor management plan. This farm is located at 2700 East King Street, Lebanon PA 17042; South Lebanon Township, Lebanon County.

Background

I have completed the required review of the subject odor management plan listed above. Final corrections to the plan were received by the State Conservation Commission on December 18, 2015. The plan is considered to be in its final form for consideration of action.

The operation described in this plan is considered the following designations:

☒ A Concentrated Animal Operation (CAO) under the PA Nutrient and Odor Management Act
☐ A Voluntary Agricultural Operation (VAO) under the PA Nutrient and Odor Management Act
☐ A Concentrated Animal Feeding Operation (CAFO) under the Department of Environmental Protection Chapter 92 National Pollution Discharge Elimination System permitting, monitoring and compliance program

A brief description of the operation, concluding with the staff recommendation, is attached. Also attached is a copy of the complete odor management plan for the operation.

Farm Description

The Marlin Martin agricultural operation is an existing broiler operation. Special agricultural land-use designations for this operation include the following:

☐ Agricultural Security Area.
☒ Agricultural Zoning.
☐ Preserved Farm status under Pennsylvania's Farmland Preservation Program.
☐ This operation does not meet any special agricultural land-use designations.

The distance to the nearest property line is proposed to be 207 feet for the closest animal housing facility and 137 feet for the proposed manure storage facility.

'Other Livestock Operations' with animal numbers equal to or greater than 8 AEUs located within the 'Evaluation Distance Area' include a dairy operation in the east 1200'-1800' quadrant.

The surrounding land use for this rural area includes the predominant terrain features of: open farmland with homes typically along the road frontage. This site is in a rural area approximately 1 mi to the east of the town outskirts (Lebanon).

Assessment

Animal Housing Facilities:
Existing Facilities – This existing farm includes 31,500 Broilers (69.9 AEUs) housed in Broiler Barn #1.

Proposed Regulated Facilities – This plan proposes the expansion of the operation with 83,000 Broilers (184.19 AEUs) to be housed in the proposed Broiler Barns # 2 & 3. Additionally, 2 beef steers (1.41 AEUs) are being brought onto this site and pastured for 270 days from spring to fall, then they will be sent to the slaughter house; no animal housing facilities are proposed for these cattle.

Manure Storage Facilities:
Existing Facilities – This existing farm does not include any existing manure storage facilities on the operation.

Proposed Regulated Facilities – This plan proposes the expansion of the operation to include a dual purpose mortality composting facility and manure storage facility. A property line setback waiver is not required to meet the Nutrient Management Program regulations.

Odor Site Index
On November 24, 2015, Karl Dymond, OM Program Coordinator, along with Dr. Robert Mikesell, PSU OM Technical Advisor, and the plan writer, Evin Fitzpatrick, performed a site assessment of the surrounding houses and businesses in the 'Evaluation Distance Area' to confirm the buildings identified on the plan map.

The confirmed Odor Site Index value for the proposed Broiler Barns # 2 & 3 and the proposed manure storage facility indicate a high potential for impacts with a score of 100.9. Due to the high potential for impacts, the appropriate Level I Odor BMPs for the proposed facilities are required and are properly identified in the plan. The proposed plan provides adequate detail and direction for facilitating the operator's Implementation and Operation & Maintenance of these required Odor BMPs, as well as the necessary documentation needed to demonstrate compliance with the plan and regulations.

Also due to the high potential for impacts, one or more specialized Level II Odor BMPs are required, in addition to the Level I Odor BMPs.

- The Marlin Martin operation has implemented (for approximately 10 years) Supplemental Level I Odor BMPs for the Broiler Barn # 1 (the same as the required Odor BMPs for the proposed Broiler Barns) and two Supplemental Level II Odor BMPs (Windbreak Wall and Poultry Litter Amendment) around/ in the Broiler Barn # 1.
- The Marlin Martin operation is proposing to implement the Windbreak Wall and Poultry Litter Amendment around/ in Broiler Barns # 2 & 3.
- The Windbreak Wall will be implemented prior to the construction of the Broiler Barns and will continue from the original Windbreak Wall, along the southern end of all three Broiler Barns.
- The Poultry Litter Amendment will be implemented after the barns have been constructed, but typically prior to populating/ re-populating the barns.

Recommendation

Based on staff reviews, the OMP for the Marlin Martin operation meets the planning and implementation criteria established under the PA Nutrient & Odor Management Act and Facility Odor Management Regulations. I therefore recommend the plan for State Conservation Commission approval.

The Commission acted to approve / disapprove this odor management plan submission at the public meeting held on _____.

_____ _____
Karl G. Brown, Executive Secretary Date

Odor Management Plan

Prepared For:

Marlin Martin

2700 East King Street
Lebanon, PA 17042
(717) 629-1995
County/ Municipality: Lebanon/South Lebanon

Prepared By:
Evin Fitzpatrick
OM Certification # 108
3050 Yellow Goose Road
Lancaster, Pa 17601
717-393-2176
evinf@redbarnag.com

For Official Use Only	
Date of Plan Submission:	November 30, 2015
Date of Plan Approval:	
Date(s) of Plan Updates (not requiring SCC action**):**	

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MARLIN MARTIN Odor Management Plan

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Planner and Operator Commitments & Responsibilities

Plan Development Requirements

This odor management plan (OMP) has been developed to meet the requirements of Pennsylvania's Nutrient and Odor Management Act, Act 38 of 2005 (Act 38), for the State Conservation Commission's (Commission) Odor Management Program for the following farm type(s): ***NOTE**: Select all check-boxes that apply.*

- ☒ Pennsylvania Act 38 Concentrated Animal Operation (CAO)
- ☐ Pennsylvania CAFO (Concentrated Animal Feeding Operation (CAFO) program
- ☐ Odor Management Program Volunteer Animal Operation (VAO)

Planner Signature & Agreement

The planner's signature below certifies that this plan was developed in conjunction with, and reviewed by the operator, prior to submitting it for review. The plan cannot be submitted until the operator understands and agrees with all the provisions of the plan. If the reviewer finds that the planner has not reviewed at least the Plan Summary with the farmer, then the plan reviewer is to relay that information to the certification program staff for their consideration.

The planner's signature and below date(s) certifies that a site visit(s) was conducted **by an Act 38 Certified Odor Management Specialist** to verify the criteria within the evaluation distance area at the time of developing the plan, specifically for the odor source(s), for locating houses, churches, businesses and public use facilities within the evaluation distance, as well as for the site land use and the surrounding land use factors.

The information contained in this plan is accurate to the best of my knowledge. This plan has been developed in accordance with the criteria established for the Act 38 Odor Management Program indicated above. I affirm the foregoing to be true and correct, and make these statements subject to the penalties of 18 Pa. C.S. § 4904, relating to unsworn falsification to authorities.

Planner Name: *Evin Fitzpatrick* *Certification number:* *OMC #108*

Signature of Planner:  *Date:* *11/25/2015*

Date(s) Evaluation Distance Area Site Visit Conducted: *11/25/2015*

Odor Management Plan Name: **Marlin Martin**

Operator Requirements

Plan Implementation & Documentation: Odor Management Plans developed under Act 38 are required to be implemented as approved in order to maintain compliance. Implementation includes: adherence to installation of listed Odor Best Management Practices (Odor BMPs) within implementation schedule timeframes and conditions; maintenance of the Odor BMPs consistent with the operation and maintenance schedule timeframes; conditions contained in this plan; and record keeping obligations of the program. Agricultural operations are also required to keep and maintain accurate records of the Odor BMPs consistent with the schedules and are required to allow the Commission access to those records in order to determine the compliance status.

Post Construction Inspection: Prior to utilizing a new or expanded animal housing facility or manure storage facility addressed in this plan, the operation must receive written approval from the Commission confirming implementation of the plan. **In order to obtain this written approval the operator, upon completion of construction activities, must inform the Commission in writing via certified mail of their desire to begin using the new or expanded regulated facilities**. At that time the Commission will send out a representative to assess and verify the implementation of the approved Odor Management Plan.

Compliance Inspections: Plans developed under this program also require agricultural operations to allow periodic access by the Commission for status review and complaint inspections, in order to determine the status of the operation's compliance and whether a plan amendment is required. Inspections will be scheduled at least annually. Agricultural operations will provide the operation's biosecurity contact and protocols to the Commission.

Odor Management Plan Signature Requirements

In accordance with §83.741(i), plans shall be signed by the *Operator/ Authorized Representative* 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 or president. For any other authorized representative, the plan must 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.

NOTE: When using a business name for the plan, the business name must be registered with the Pennsylvania Department of State.

Operator Signature & Agreement

In accordance with §§83.751 (content of plans) and 83.762 (operator commitment statement), the *Signature of Operator/ Authorized Representative* below certifies that I was involved with the development of this plan, that the plan writer reviewed the plan with me, and that I am agreeable to the provisions outlined in this plan. All the information I provided in this odor management plan is accurate to the best of my knowledge and I will implement the practices and procedures outlined in the odor management plan in order to manage the potential for impacts from the offsite migration of odors associated with the operation for which this OMP is written.

Indicate business entity type: Sole Proprietor ☒ Partnership/ LP/ LLP ☐ Corporation/ LLC ☐

Signature of Operator/ Authorized Representative: _____ *Date:* 11-24-15

Print Name of Operator/ Authorized Representative: *Marlin Martin*

Title of Operator/ Authorized Representative: *Owner/Operator*

Business Legal Name of the Operation: *Marlin Martin*

Plan Summary

A. Operation Summary *(see Appendix 1 to view complete Operation Information)*

Proposed Facilities:

Detail the Animal Type associated with the Proposed Facilities and that is consistent with the Animal Type detailed in the OSI. If animal numbers (AEUs) from existing facilities are voluntarily being added to the plan, detail the AEUs number; otherwise state "None", "Zero (0)" or "Not Applicable".

***NOTE**: AEU calculations and AEUs per acre calculation must reflect those in the most current Act 38 NMP, otherwise explain the difference and submit the calculations in Appendix 5: Supporting Documentation.*

Proposed OSI Animal Type:	Broiler, Steers
Proposed Animal Numbers:	83,000 Broilers, 2 steers
Proposed AEUs *(per animal type)*:	184.19 AEUs for Broilers, 1.90 AEUs for steers
Voluntary Existing Animal Type:	none
Voluntary Existing AEUs *(per animal type)*:	none
Total AEUs Covered by this Plan:	186
AEUs per acre for the operation:	186 AEUs/acre

Is there an approved Act 38 NMP for this operation? ☐ Yes ☒ No

***NOTE**: If No, explain in Appendix 5: Supporting Documentation.*

B. Odor Site Index Summary *(see Appendix 3 to view complete Index)*

***NOTE**: If multiple Geographic Centers are used, you must provide scores for each geographic center. Scores listed here must match the final scores in the OSI.*

Score: 101

C. Odor BMP Implementation, Operation & Maintenance Schedule

Level I Odor BMPs Principles

1. Steps taken to reduce dust and feed accumulation in pens, aisles, and on animals.
2. Manage ventilation to provide sufficient fresh airflow throughout the facility to keep animals and facility surfaces clean and dry.
3. Manage manure to minimize damp, exposed manure that contributes to odor generation.
4. Remove mortalities daily and manage appropriately.
5. Manage feed nutrients to animal nutrient requirements in order to avoid excess nutrient excretion.
6. Manage manure storage facility to reduce exposed surface area and off-site odor transfer.

Definitions:

- **Required Odor BMPs** – In accordance with §§83.771, 83.781-83.783, Required Odor BMPs are the Odor BMPs required for implementation when there is a neighboring facility or a public use facility in the evaluation distance area, or when the OSI score is 50 or more points (Level I Odor BMPs), and when the OSI score is 100 or more points (Level II Odor BMPs).
- **Voluntary Odor BMPs** – The operator has voluntarily chosen to include Odor BMPs in the plan. Voluntary Odor BMPs must meet the same program standards that Required Odor BMPs do for implementation, operation, maintenance, and documentation.
- **Supplemental Odor BMPs** – In accordance with §83.781(e), Supplemental Odor BMPs are implemented in addition to the approved Odor BMPs in the plan and are also associated with plan updates.

***NOTE**: Odor BMPs must be relevant to the site specific factors and must be maintained for the lifetime of the regulated facility unless otherwise approved.*

Level I Odor BMPs to be Implemented

Select each check-box that applies; if more than one category applies, clearly detail the respective Level I Odor BMPs criteria with each respective category. Detail below all Level 1 Odor BMPs Principles, adapted from the PA Odor BMP Reference List, that are applicable to the site specific factors of this animal operation and the regulated facilities.

☐ **None Required**

☐ **Voluntary Level I Odor BMP:**

☒ **Required Level I Odor BMP:**

☐ **Supplemental Level I Odor BMP:**

1. **Steps taken to reduce dust and feed accumulation in pens, aisles, and on animals.**
   Feed Wastage – Feeding equipment will be adjusted to ensure the appropriate flow rate of feed into the feeder. Feeder height will be checked daily and raised as needed to match the height of the birds. Feed junction boxes will be monitored daily for malfunction. Feed spills will be removed after any necessary repairs are performed. Feed height in the feed trough will be monitored daily and adjusted as needed.

2. **Ventilation is managed to provide sufficient airflow throughout the facility to keep animals and facility surfaces clean and dry.**
   Ventilation Components – Ventilation system components including computer controls, static pressure meters, fans and power winches for the curtains will be checked daily for functionality.
   Mechanical Ventilation –The ventilation system will be designed to provide appropriate ventilation during the winter months. As ambient temperature increases, ventilation rate will automatically increase via staged ventilation. Inlet openings will be automatically controlled by a static pressure monitor or by temperature, which will also be integrated into the computer controls.
   Fans are cleaned and inspected after each flock every 6 weeks.
   Inlet openings are adjusted to provide adequate air distribution daily or as needed.
   Static pressure monitors are calibrated daily by computer.
   Curtains are controlled by computer and checked daily.
   Curtains, cables, winches, and other components of the ventilation system are inspected daily.

3. **Manure will be managed to minimize damp, exposed manure that contributes to odor generation.**
   Moisture Control – Water delivery system and drinkers will be checked daily for leaks. Repairs will be performed as needed. The height of the nipple waterers will be inspected and adjusted daily to ensure that birds are always reaching up to the waterers.
   •Litter Maintenance – All litter will be cleaned out after each flock and exported offsite.

4. **Mortalities will be removed daily and managed appropriately.**
   Mortalities will be removed daily during walk through and placed in mortality composter for composting.

5. **Feed Nutrients will matched to animal nutrient requirements to avoid excess nutrient excretion.** -Phase feeding – Diet formulation will be matched to bird weight and age.
6. **Manage manure storage to reduce exposed surface area and off-site odor transfer.** Empty manure from storage facility per proposed Nutrient Management Plan.

Level II Odor BMPs to be Implemented:

Select each check-box that applies; if more than one category applies, clearly detail the respective Level II Odor BMPs criteria with each respective category. Detail below all Level II Odor BMPs criteria addressing the following:

1. *the general construction and implementation criteria*
2. *the corresponding timeframes of when each Odor BMP will be implemented*
3. *all operation and maintenance procedures for each Odor BMP along with the corresponding timeframes for carrying out those procedures*
4. *the lifespan of each Odor BMP.*

***NOTE**: NRCS Conservation Practice Standards and Job Sheets that are in existence for the Level II Odor BMP are encouraged to be used for construction, implementation, and operation and maintenance criteria.*

☐ **None Required**

☐ **Voluntary Level II Odor BMP:**

☒ **Required Level II Odor BMP:**

☐ **Supplemental Level II Odor BMP:**

Earthen Windbreak Wall

Implementation:

a. Construct earthen bank windbreak wall (at least as high as the top of the ventilation fans) during the excavation of the building site to deflect odors from the regulated barn into the upper air current
b. Earthen wall embankment will be placed to deflect exhaust fan emissions. See Site Map for location & layout.
c. Erosion will be controlled on each wall by installing Jute Netting and seeding the disturbed areas to a hearty grass species.
    a. Grass species will be selected that is best suited for the soil and growing conditions located around the regulated barn.
    b. Supplemental watering will (as needed) be implemented.
d. Earthen bank wall will be constructed before regulated barn is built.

Operation & Maintenance:

a. Vegetation maintained to protect the integrity of the earthen bank to minimize potential soil runoff.
b. Eroded soil from the earthen bank wall will be repaired and reseeded
c. Earthen bank wall will be maintained for the lifetime of the regulated barn.
d. Monthly inspections will be conducted to verify the integrity and to determine if any maintenance activities are needed.

Poultry Litter Amendment

Note: This operation has been using Poultry Litter Amendment (PLT supplied by Jones Hamilton Ag)

for the past 10 years in order to control the release of ammonia, reduce the pH levels in litter and increase the nutrient value of the poultry litter.

Implementation:

- Apply Poultry Litter Treatment (PLT) per the attached product data sheet:
  - Application rate for broiler litter 1 year old or less: 75-100 lbs/1,000 sq ft of floor space.
  - Application rate for broiler litter older than 1 year: 100-150 lbs/1,000 sq ft of floor space.
  - See the attached Product Data Sheet for PLT for the full application procedures.

Operation & Maintenance:

- PLT will be applied per the manufacturer's recommendations in the attached product data sheet.
- PLT or like product will be used during the life of the broiler barns.

D. Documentation Requirements

The following information will be documented by the Operator for each Odor BMP to ensure compliance with the plan. Documentation is needed to demonstrate implementation of the plan as well as for corrective actions taken for significant maintenance activities needed to return an Odor BMP back to normal operating parameters.

Level I Odor BMP Documentation Requirements

Select each check-box that applies; if more than one category applies, clearly detail each documentation criterion.

☐ **None Required – (*NOTE*: *Delete the Odor BMP Implementation Commitment Statement and the Level I Maintenance Log*)**

☐ **Level I Odor BMPs – Odor BMP Implementation Commitment Statement Only**

The Operator will annually complete the Odor BMP Implementation Commitment Statement.

☒ **Level I Odor BMPs Documentation Criteria:**

The Operator will annually complete the Odor BMP Implementation Commitment Statement. The Operator will also complete the Level I Odor BMPs Maintenance Log upon any of the following occurrences:

1. **Steps taken to reduce dust and feed accumulation in pens, aisles, and on animals.**
   Feed Wastage (**Use provided maintenance log for breakdown, general maintenance and replacement)**– Feeding equipment will be adjusted to ensure the appropriate flow rate of feed into the feeder.
   Feeder height will be checked daily and raised as needed to match the height of the birds. Feed junction boxes will be monitored daily for malfunction. Feed spills will be removed after any necessary repairs are performed. Feed height in the feed trough will be monitored daily and adjusted as needed.

2. **Ventilation is managed to provide sufficient airflow throughout the facility to keep animals and facility surfaces clean and dry.**
   Ventilation Components (**Use provided maintenance log for breakdown, general maintenance and replacement)** – Ventilation system components including computer controls, static pressure meters, fans and power winches for the curtains will be checked daily for functionality.

Mechanical Ventilation –The ventilation system will be designed to provide appropriate ventilation during the winter months. As ambient temperature increases, ventilation rate will automatically increase via staged ventilation. Inlet openings will be automatically controlled by a static pressure monitor or by temperature, which will also be integrated into the computer controls.
Fans are cleaned and inspected after each flock every 6 weeks.
Inlet openings are adjusted to provide adequate air distribution daily or as needed.
Static pressure monitors are calibrated daily by computer.
Curtains are controlled by computer and checked daily.
Curtains, cables, winches, and other components of the ventilation system are inspected daily.

3. **Manure will be managed to minimize damp, exposed manure that contributes to odor generation.**
Moisture Control (**Use provided maintenance log for breakdown, general maintenance and replacement)** – Water delivery system and drinkers will be checked daily for leaks. Repairs will be performed as needed. The height of the nipple waterers will be inspected and adjusted daily to ensure that birds are always reaching up to the waterers.
•Litter Maintenance – Approximately 70% of the litter will be cleaned out after each flock and exported offsite. Approximately 30% of the litter will be cleaned out after each flock and stored onsite and used as a compost material. The compost will be exported offsite to a broker.

4. **Mortalities will be removed daily and managed appropriately.**
Keep track of daily Mortalities which will be removed daily during walk through and placed in mortality composter for composting. (**Maintenance log needs to be filled out when an event occurs that disrupts typical mortality management activities such as a significant mortality event**)

5. **Feed Nutrients will matched to animal nutrient requirements to avoid excess nutrient excretion.** -Phase feeding – Diet formulation will be matched to bird weight and age. **(Maintenance log needs to be filled out when there is an event that alters Phase feeding)**

6. **Manage manure storage to reduce exposed surface area and off-site odor transfer.**
Manure/compost storage facility (**Use provided maintenance log when general maintenance occurs on the manure storage facility)**

Level II Odor BMP Documentation Requirements

Select each check-box that applies; if more than one category applies, clearly detail each documentation criterion.

☐ **None Required –** ***(NOTE: Delete the Level II Quarterly Observation Log)***

☒ **Level II Odor BMP Documentation Criteria:**

The Operator will complete the Level II Odor BMPs Quarterly Observation Log, at least on a quarterly basis, detailing the proper implementation of the Odor BMPs as identified in the Implementation, Operation & Maintenance Schedule. The Operator will also complete the Level II Odor BMPs Quarterly Observation Log upon any of the following occurrences:

Earthen Windbreak Wall

- Document when the earthen windbreak wall is repaired and reseeded due to observed erosion.

Poultry Litter Treatment

- Document when a change occurs with the supplier of poultry litter treatment material (other than PLT, which is currently used).

Odor BMP Implementation Commitment Statement

To be completed and signed annually by operators which have a neighboring facility or a public use facility in the evaluation distance area. This form is an attestment of the operator for the daily implementation of the Odor BMPs, and in accordance with §83.791, it is to be kept on site for at least 3 years.

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Odor Management Plan Name: Marlin Martin

Level I Odor BMPs Principles

1. Steps were taken to reduce dust and feed accumulation in pens, aisles, and on animals.
2. Ventilation was managed to provide sufficient fresh airflow throughout the facility to keep animals and facility surfaces clean and dry.
3. Manure was managed to minimize damp, exposed manure that contributes to odor generation.
4. Mortalities were removed daily and managed appropriately.
5. Feed nutrients were matched to animal nutrient requirements to avoid excess nutrient excretion.
6. Manage manure storage to reduce exposed surface area and off-site odor transfer.

Odor Management Plan Requirements

In accordance with §§83.762 operator commitment statement), 83.771 (managing odors), 83.781 – 83.783 (Odor BMPs and schedules), 83.791 – 83.792 (documentation requirements) and 83.802 (plan implementation), I affirm that all the information I provided in the odor management plan is accurate to the best of my knowledge.

In order to manage the potential for impacts from the offsite migration of odors associated with the operation, I affirm that I have implemented the specific practices and procedures detailed in the odor management plan Odor BMP Implementation, Operation & Maintenance Schedule (principles identified above) from DATE: _____ to DATE: _____ (CY/ FY, etc.).

I affirm the foregoing to be true and correct, and make these statements subject to the penalties of 18 Pa. C.S. § 4904, relating to unsworn falsification to authorities.

Signature of Operator: _____ *Date:* _____

Name of Operator: *Marlin Martin*

Title of Operator: *Owner/Operator*

Level I Odor BMPs – Maintenance Log YEAR _____

*(**NOTE**: The operator will record occurrences of mechanically related maintenance activities or for any corrective actions taken.)*

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List ODOR BMPs	*DATE*	*NOTES*

Level II Odor BMPs – Quarterly Observation Log YEAR _____

*(**NOTE**: The operator will record observations relating to 1) the implementation of each Level II Odor BMP at least on the first day (approximately) of each quarter of the year or in accordance with the Implementation, Operation & Maintenance Schedule, and 2,) for mechanically related maintenance activities, as soon as possible upon the observation that maintenance is needed, or upon **each occurrence of any corrective actions taken.**)*

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Select Quarter:	☐ **1st Quarter (January)**	☐ **2nd Quarter (April)**	☐ **3rd Quarter (July)**	☐ **4th Quarter (October)**

LEVEL II ODOR BMP NAME:

List ACTIVITIES	***DATE***	***NOTES***
Maintenance Earthen Windbreak Wall		
Change in litter additive		

Appendix 1: Operation Information

Part A: Odor Source Factors

1. **Site Livestock History:** Broilers 69.9 AEUs
   Detail the Maximum AEUs of Livestock on the site within the past 3 years.

Existing Facilities Description:

***NOTE**: If the facilities or animal information differ from the most current Nutrient Management Plan, detail the differences in Appendix 5: Supporting Documentation.*

***Definitions**:* Existing facilities are those animal housing facilities or manure storage facilities constructed before February 27, 2009, and are not subject to Odor Management program requirements.

2. **List the Existing Animal Types:** Broilers **Existing Animal Numbers:** 31,500
3. **Existing Animal Equivalent Units (AEUs) per Animal Type:** 69.9 AEUs
4. **Existing Animal Housing Facility(ies):**

   Describe all existing animal housing facilities including their dimensions, capacity and existing Odor BMPs used to address potential impacts.

Animal Housing Facility	Dimensions	Livestock Capacity	Existing Odor BMPs
Broiler barn 1	55’ X 500’	31,500	PLT, Earthen Windbreak wall
Steer Barn (currently no animals) see appendix 5	50’ X 80’	2 steers	none

5. **Existing Manure Storage Facility(ies) and Manure Handling Systems:**

   a. *Describe all existing manure storage facilities and manure treatment technology facilities, including their dimensions, capacity and existing Odor BMPs used to address potential impacts.*

Manure Storage Facility	Dimensions	Usable Capacity	Existing Odor BMPs
None			

   b. *Provide a narrative description detailing the manure handling systems, including manure storage facilities, manure stacking areas, and manure treatment technology facilities.*

   Caked broiler manure is cleaned out after each flock and full barn cleanout occurs annually or biannually and field applied to crops.

Proposed Regulated Facility (ies) Description:

Detail the information below, clearly indicating:
1) The animals that will be housed in the proposed animal housing facility (ies), which include expansions onto existing facilities;
2) The manure type (animal type detailed in the OSI) that will be stored in the proposed storage facility and identifying the Act 38 Nutrient Management Program requirements that must be followed for the proposed manure storage facility(ies);
3) If Voluntary Existing Animal Numbers and AEUs or Transferred Existing AEUS do not apply, state “None”, “Zero (0)” or “Not Applicable” for that criterion.

***NOTE**: The Animal Type associated with the Proposed Facilities must be consistent with the Animal Type detailed in the OSI.*

***NOTE**: If the proposed facilities, animal information, and AEU calculations differ from the most current Nutrient Management Plan (NMP), detail the differences in Appendix 5: Supporting Documentation.*

***Definitions**:*

- **Proposed AEUs** are the new additional AEUs associated with the proposed regulated animal housing facility (ies).
- **Voluntary Existing AEUs** are the AEUs associated with the existing animal housing facility (ies).
- **Proposed AEUs** and **Voluntary Existing AEUs** are used for determining the Odor Site Index evaluation distance area.
- **Transferred Existing AEUs** are existing AEUs on the site that will be transferred into the animal housing facility being evaluated.
- **Total AEUs** are used for determining significant change of the regulated facility (ies); a significant change will require an amendment to the plan. A significant change is defined as a net increase of equal to or greater than 25% in AEUs, as measured from the time of the initial plan approval.

6. (a) Proposed Facility OSI Animal Types: Broilers, Beef Steers

Proposed Animal Numbers per animal type: 83,000 Broilers, 2 beef steers

Proposed AEUs per animal type: 184.19 AEUs Broilers, 1.90 AEUs beef steers

(b) Voluntary Existing Animal Types: None

Voluntary Existing Animal Numbers: None

Voluntary Existing AEUs per animal type: None

(c) Total AEUs Covered by this Plan: 186 AEUs

(d) Acres for the operation associated with an approved Act 38 NMP or acres utilized for the CAO calculation: 1 ac

(e) Total AEUs/ Acre for the operation: 186 AEUs/Acre

***NOTE**: The AEUs per acre calculation is only used to verify CAO status. AEUs per acre calculation must reflect the calculations in the most current NMP, otherwise explain the difference and submit the calculations in Appendix 5: Supporting Documentation.*

(f) Transferred Existing Animal Types: ☐ Check only when Applicable

***NOTE:** Detail the following information in Appendix 5: Supporting Documentation when 0 "Proposed AUEs" are proposed due to transferring existing animals on the site into the animal housing facility being evaluated:*

1) The OSI Animal Type associated with the Proposed Facilities,
2) The numbers of animals transferred, and
3) The AEUs. This information will be used for determining a significant change which will require an amendment to the plan.

7. Proposed new or expanded animal housing facility(ies):

Detail all proposed animal housing facilities, or portions thereof, including their dimensions and livestock capacity.

***NOTE**: If the proposed facilities differ from the most current NMP, detail the differences in Appendix 5: Supporting Documentation.*

Animal Housing Facility ☐ None Proposed	**Dimensions**	**Livestock Capacity**
Broiler barn 2	63' X 500'	41,500
Broiler barn 3	63' X 500'	41,500

8. Proposed new or expanded manure storage facility(ies):

***NOTE**: If the proposed facilities differ from the most current NMP, detail the differences in Appendix 5: Supporting Documentation.*

(a) *Provide a narrative description detailing all manure handling systems (including all manure storage facilities, manure stacking areas, and manure treatment technology facilities) after the addition of the proposed facilities.*

Approximately 70% of the broiler manure from the broiler barns will be cleaned out annually and exported off the farm to a broker. Approximately 30% of the broiler manure will be used to compost the broiler operation mortality in the manure storage located on the map. The compost

will then be exported offsite to a broker.

(b) *Detail all proposed manure storage facilities, manure stacking areas, and manure treatment technology facilities.*

***NOTE**: If a waiver is required, it must be attached in Appendix 5: Supporting Documentation for the plan to be administratively complete.*

Manure Storage Facility ☐ None Proposed	**Dimensions**	**Usable Capacity**
Proposed manure storage	40' X 60' X 6'	14,400 cu ft

Act 38 NM Program Setback Requirements Verification

***NOTE**: When manure storage facilities are proposed, N/A cannot be detailed for both c & d*

(c) **Existing Operations** ☐ Not Applicable.

Select all check-boxes that apply for Existing Operations proposing manure storage facilities.

In accordance with planning provisions of the Commission's Nutrient Management Program regulations, the proposed manure storage(s) is part of an existing operation (operation that produced livestock or poultry on or before October 1, 1997) and will be located having a minimum setback distance of the following:

i) 100' minimum setback distance (in accordance with **§83.351(a)(2)(v)(A)-(E)**) from wetlands, water bodies and wells (public and private). ☒Yes ☐ Not Applicable

ii) 100' minimum setback distance (in accordance with **§83.351(a)(2)(v)(F)**) a from the property line; otherwise an executed Manure Storage Setback Waiver from the Neighboring Landowner, must be attached. ☒Yes ☐ Not Applicable

iii) 200' minimum setback distance (in accordance with **§83.351(a)(2)(v)(G)**) from wetlands, water bodies and wells (public and private) for a manure storage facility of 1.5 million gallons or larger capacity or that is located on slopes exceeding 8%. ☐Yes ☒ Not Applicable

iv) 200' minimum setback distance (in accordance with **§83.351(a)(2)(v)(H)**) from the property line for a manure storage facility of 1.5 million gallons or larger capacity or that is located on slopes exceeding 8% and the slope is toward the property line; otherwise an executed Manure Storage Setback Waiver from the Neighboring Landowner, must be attached. ☐Yes ☒ Not Applicable

(d) **New Operations/ New Animal Enterprises** ☒ Not Applicable.

Select all check-boxes that apply for New Operations/ New Animal Enterprises proposing manure storage facilities.

If the proposed manure storage(s) is part of a new operation (operation that produced livestock or poultry after October 1, 1997), or a new animal enterprise (an existing operation that expanded after October 1, 1997, via producing different livestock or poultry than what was previously produced – see NM Tech Manual, Section III) and in accordance with planning provisions of the Commission's Nutrient Management Program regulations the proposed storage will be located having a minimum setback distance of the following:

i) 100' minimum setback distance (in accordance with **§83.351(a)(2)(vi)(A)-(E))** f from wetlands, water bodies and wells (public and private). ☐Yes ☐ Not Applicable

ii) 200' minimum setback distance (in accordance with **§83.351(a)(2)(v)(F))** from the property line; otherwise an executed Manure Storage Setback Waiver from the Neighboring Landowner, must be attached. ☐Yes ☐ Not Applicable

iii) 200' minimum setback distance (in accordance with **§83.351(a)(2)(v)(G)**) from wetlands, water bodies and wells (public and private) for a manure storage facility of 1.5 million gallons or larger capacity or that is located on slopes exceeding 8%. ☐Yes ☐ Not Applicable

iv) 300' minimum setback distance (in accordance with **§83.351(a)(2)(v)(H)**) from the property line for a manure storage facility of 1.5 million gallons or larger capacity or that is located on slopes exceeding 8% and the slope is toward the property line ; otherwise an executed Manure Storage Setback Waiver from

the Neighboring Landowner, must be attached. ☐ Yes ☐ Not Applicable

9. Construction activities of the proposed regulated facilities:

NOTE: Construction activities must be started within 3 years of the plan approval date.

a. *Detail the proposed construction sequence timeframes for each proposed regulated facility (or portions thereof)* Spring 2016

b. *Have construction activities started on any of the proposed regulated facilities?* ☐ Yes ☒ No *If yes, please detail:* _____

Part B: Site Land Use Factors

1) Select the applicable check-box below for each special agricultural land use designation, and

2) Provide written verification in Appendix 5: Supporting Documentation for each agricultural land use designation claimed.

NOTE: Documentation verifying each claimed land use must be attached for the plan to be administratively complete.

Agricultural land use designations applicable to the site being evaluated:

1. Agricultural Security Area ☐ Yes / No ☒
2. Agricultural Zoning ☒ Yes / No ☐
3. Preserved Farm ☐ Yes / No ☒

Part C: Surrounding Area Land Use Factors

NOTE: Detail applicable criteria for 1 and 2 on the Operational Map in Appendix 2.

1. Other Livestock Operations (≥ 8 AEUs) within the evaluation distance area ☒ Yes / No ☐
   If yes, then list the type of operation, the direction (N, S, E, W) and quadrant (distance range from the facility). One dairy is located in the east quadrant between 1200-1800 feet.

2. Distance to nearest property line measurement:
   NOTE: Measured from nearest corner of the proposed animal housing facility and/or manure storage facility to the property line. Measurements must also be detailed on the Operational Map in Appendix 2.
   a. Animal Housing Facility measurement 207(ft.) ☐ Not Applicable
   b. Manure Storage Facility measurement 137(ft.) ☐ Not Applicable

3. If nearest property (from the nearest property line measurements indicated in "2" above) is less than 300', is this neighboring property a Preserved Farm? ☐ Yes / No ☒

   NOTE: Documentation verifying this claimed status must be attached for the plan to be administratively complete.

   (a) *If "Yes" is indicated, detail the name and address in Appendix 5: Supporting Documentation of the nearest neighboring property owner who has a Preserved Farm.*

Appendix 2: Operational Maps

Topographic Map

Odor Management Plans must include a topographic map drawn to scale with a map legend, identifying:

- Operation boundaries;
- Location of existing and proposed animal housing and manure storage facilities on the operation;
- Location of operation-related neighboring facilities;
- Location of neighboring facilities (normally occupied homes, active businesses and churches) and public use facilities within the evaluation distance area;
- Local topography (as indicated by the topographic lines);
- Geographic center with concentric circles drawn at 600' intervals for the entire evaluation distance area;
- Identification of the various map quadrants to include North, South, East and West;
- Distance to nearest property line from the nearest facility;
- Road names within the evaluation distance area; and
- All neighboring facilities and public use facilities that are being given credit for the Intervening Topography and Vegetation Factor.

In order to distinguish the following criteria from the other neighboring facilities and public use facilities, the Operational Map and the associated map legend must have separate symbols detailing the following:

- All operation-related neighboring facilities, and
- All neighboring facilities and public use facilities which are being given credit for the Intervening Topography and Vegetation Factor.

***NOTE**: The scale chosen must be reasonable and practical for use in evaluating the OMP. For example:*

- *A scale of 1" = 600' is an example of a scale that is reasonable for use in determining evaluation distances, setbacks, etc., but may not be practical for larger evaluation distance areas for fitting the map on one 8 ½' x 11' sheet of paper.*
- *A scale of 1.37" = 267.5' is an example of a scale that may be practical for fitting on one 8 ½' x 11' sheet of paper, but in a scale that is not reasonable or very useful.*
- *Maps need to be to a scale that shows sufficient detail to be reasonable and useful. Planners are encouraged to use a scale that can be divided evenly by, or into, 600' by a round whole number*
- *Multiple maps are encouraged to be provided for the purpose of facilitating specific details, i.e. aerial maps, etc.*

Site Map

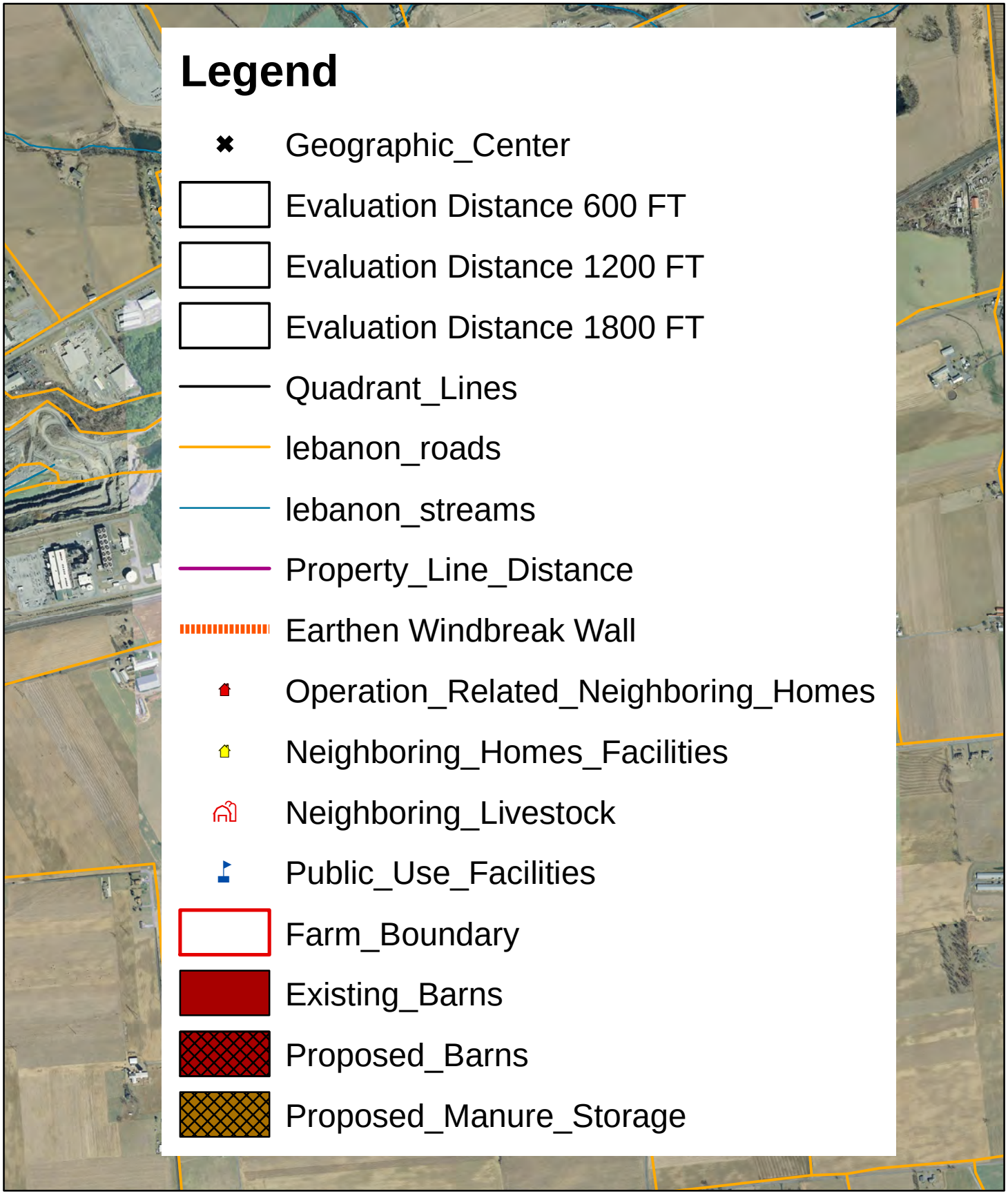
The purpose of the site map is to facilitate the plan review process of identifying specific details about the operation being evaluated. Odor Management Plans must include a site map of the operational related facilities drawn to scale with a map legend, identifying at a minimum the following:

- Operation boundaries;
- Location of existing and proposed animal housing and manure storage facilities on the operation;
- Geographic center with concentric circles drawn at 600' intervals; and
- Distance to nearest property line from the nearest facility

If there are multiple facilities on the site, detail the name of each of the facilities as per what the operator refers to them as, i.e. Layer #1 – Layer #5, mortality composting facility, etc.

If the evaluation distance area is small enough, i.e. a 1200' evaluation distance area, to clearly identify the specific details required, then a separate map will not be required.

Marlin Martin OMP
Legend

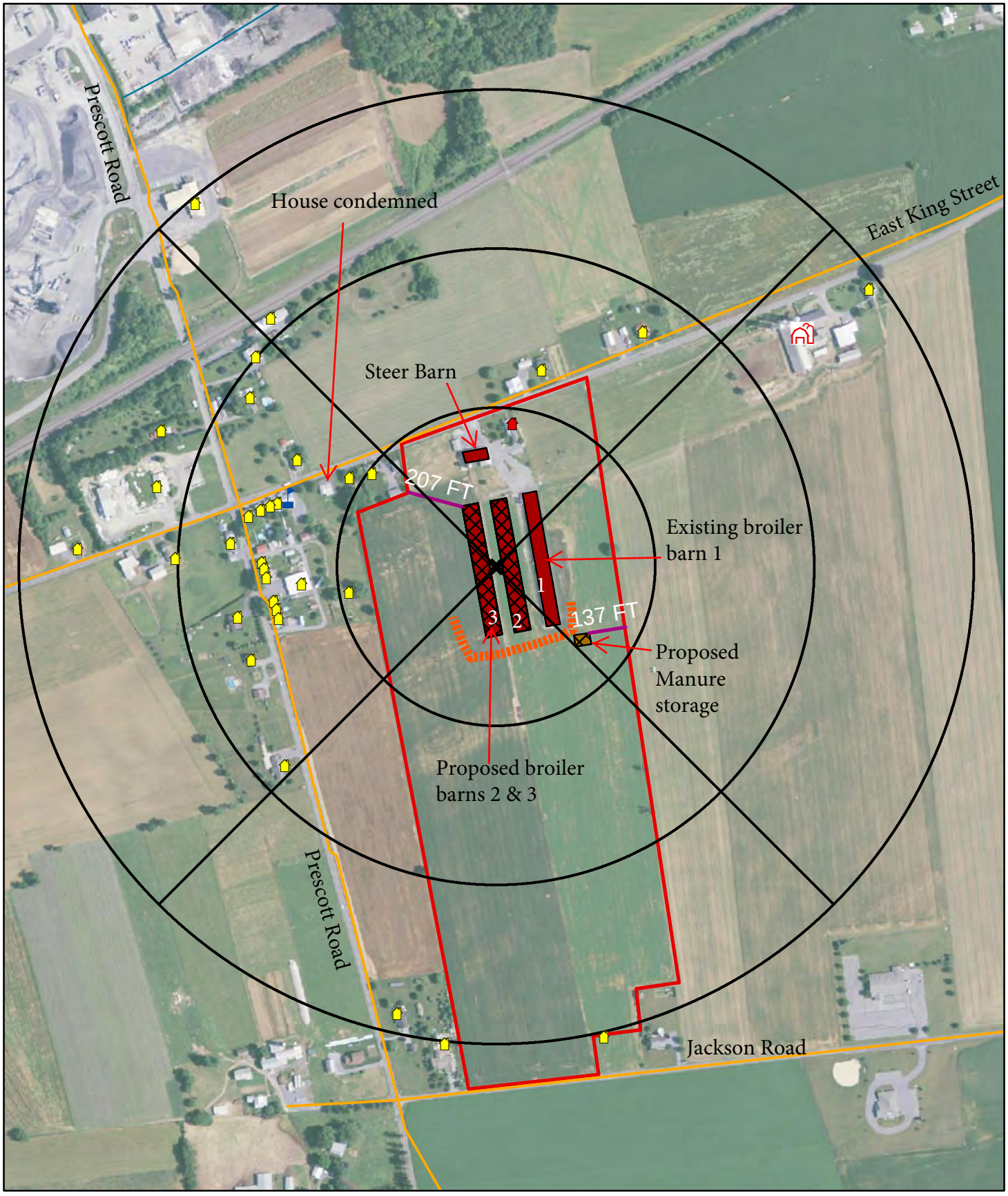


redbarn

1,300 650 0 1,300 Feet

N
W E
S

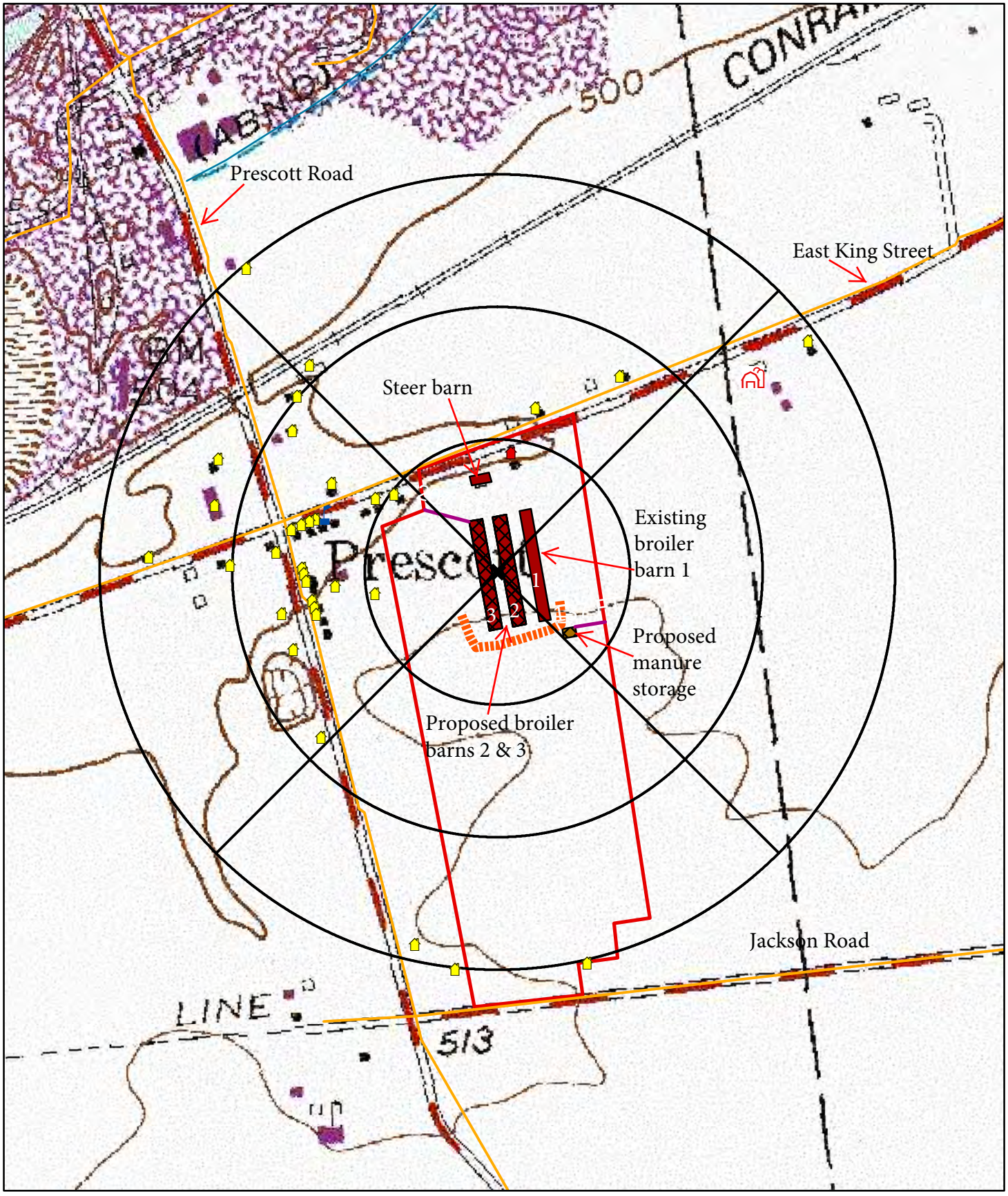
Marlin Martin OMP
Site Map



500 250 0 500 Feet

N
W E
S

Marlin Martin OMP
Topo Map



600 300 0 600 Feet

N
W E
S

Appendix 3: Plan Evaluation – OSI

Act 38 Odor Managment Plan - Odor Site Index

Operator Name	Marlin Martin	
Planner Name	Evin Fitzpatrick	
Type of Operation	Broilers	
Voluntary Existing AEUs	0	
Proposed AEUs	186	
Previously Approved AEUs	0	
AEUs Covered by OMP	186	
Evaluation Distance	1800'	
Part A: Odor Source Factors		**OSI Score**
Facility Size Covered by OMP	186	2
Site Livestock History	50-199 AEUs _6pts	6
Manure Handling System	Poultry - Multi-flock litter, with or w/o external covered storage-4pts	4
		12.00
Part B: Site Land Use		
Ag Security Zone	No (0 pct)	0
Ag Zoning	Yes (-10 pct)	-12.45
Preserved Farm	No (0 pct)	0
		-12.45
Part C: Surrounding Land Use		
Other Livestock >8 AEU in evaluation distance	1 or more (0 pts)	0.00
Distance to Nearest Property Line	<150' (10 pts)	10.00
If nearest property is <300', is it preserved farmland	No (0 pts)	0.00
Neighboring Homes		89.50
Public Use Facilities		13.00
		112.50
Species Adjustment Factor	Broilers,turkeys (-.1)	100.845
	Final OSI Score	**100.845**
	Level 2 BMPs Required	

Act 38 Odor Managment Plan - Odor Site Index

East Quadrant	<600	600-1200	1200-1800	1800-2400	2400-3000		
# Neighboring Facilities	0	0	1	None	Select from list		
Facility Value	**15**	**7**	**3**	**0**	**0**		
Home Shielding	Select from list	Select From List	1200-1800 None (1)	Select From List	Select from list	**Total Facilities**	**3.0**
# Public Use Facilities	0	0	0	0		**Total Public**	**0.0**
Public Use Value	**40**	**20**	**10**	**5**	**3**		
Public Use Shielding	Select from list	Select from list	Select from list	Select from list	Select from list	**Total East**	**3.0**
South Quadrant	<600	600-1200	1200-1800	1800-2400	2400-3000		
# Neighboring Facilities	0	0	3	None	Select from List		
Facility Value	**10**	**5**	**2**	**0**	**0**		
Home Shielding	Select from list	600-1200 None (1)	1200-1800 None (1)	1800-2400 None (1)	Select from list	**Total Facilities**	**6.0**
# Public Use Facilities	0	0	0	0		**Total Public**	**0.0**
Public Use Value	**30**	**15**	**7**	**4**	**2**		
Public Use Shielding	Select from list	Select from list	Select from list	1800-2400 None (1)	Select from list	**Total South**	**6.0**
North Quadrant	<600	600-1200	1200-1800	1800-2400	2400-3000		
# Neighboring Facilities	0	2	2	None	Select from List		
Facility Value	**6**	**3**	**0.5**	**0**	**0**		
Home Shielding	<600 None (1)	600-1200 None (1)	1200-1800 None (1)	1800-2400 None (1)	Select from list	**Total Facilities**	**7.0**
# Public Use Facilities	0	0	0			**Total Public**	**0.0**
Public Use Value	**25**	**13**	**6**	**3**	**1**		
Public Use Shielding	Select from list	Select from list	Select from list	Select from list	Select from list	**Total North**	**7.0**
West Quadrant	<600	600-1200	1200-1800	1800-2400	2400-3000		
# Neighboring Facilities	2	20	3	None	Select from list		
Facility Value	**6**	**3**	**0.5**	**0**	**0**		
Home Shielding	<600 None (1)	600-1200 None (1)	1200-1800 None (1)	Select From List	Select from list	**Total Facilities**	**73.5**
# Public Use Facilities	0	1	0			**Total Public**	**13.0**
Public Use Value	**25**	**13**	**6**	**3**	**1**		
Public Use Shielding	Select from list	600-1200 None (1)	Select from list	Select from list	Select from list	**Total West**	**86.5**
						Grand Total	**102.5**

OSI Version 2.0 August 26, 2013

Appendix 4: Biosecurity

Biosecurity Protocol Contact Information

Detail the point of contact for information on this operation's biosecurity protocols:

Name:	Marlin Martin	Phone:	717-629-1995
E-mail:	marlin@eaglebuildingsolutions.com	Relationship:	Owner

Appendix 5: Supporting Documentation

This section is reserved for the plan writer when developing this plan to have a dedicated area to include supporting documentation such as for agricultural land use designation verification, Nutrient Management program setback waiver verification, AEU calculation verification when no NMP is available, etc.

Provide a heading for each topic discussed in this Appendix.

An Act 38 NMP is concurrently being developed for this operation.

Mr. Martin is proposing to have 2 steers in a 1.0 acre pasture within the next three years.

CAO Calculations

For:

Marlin Martin

by:

Red Barn Consulting Inc.

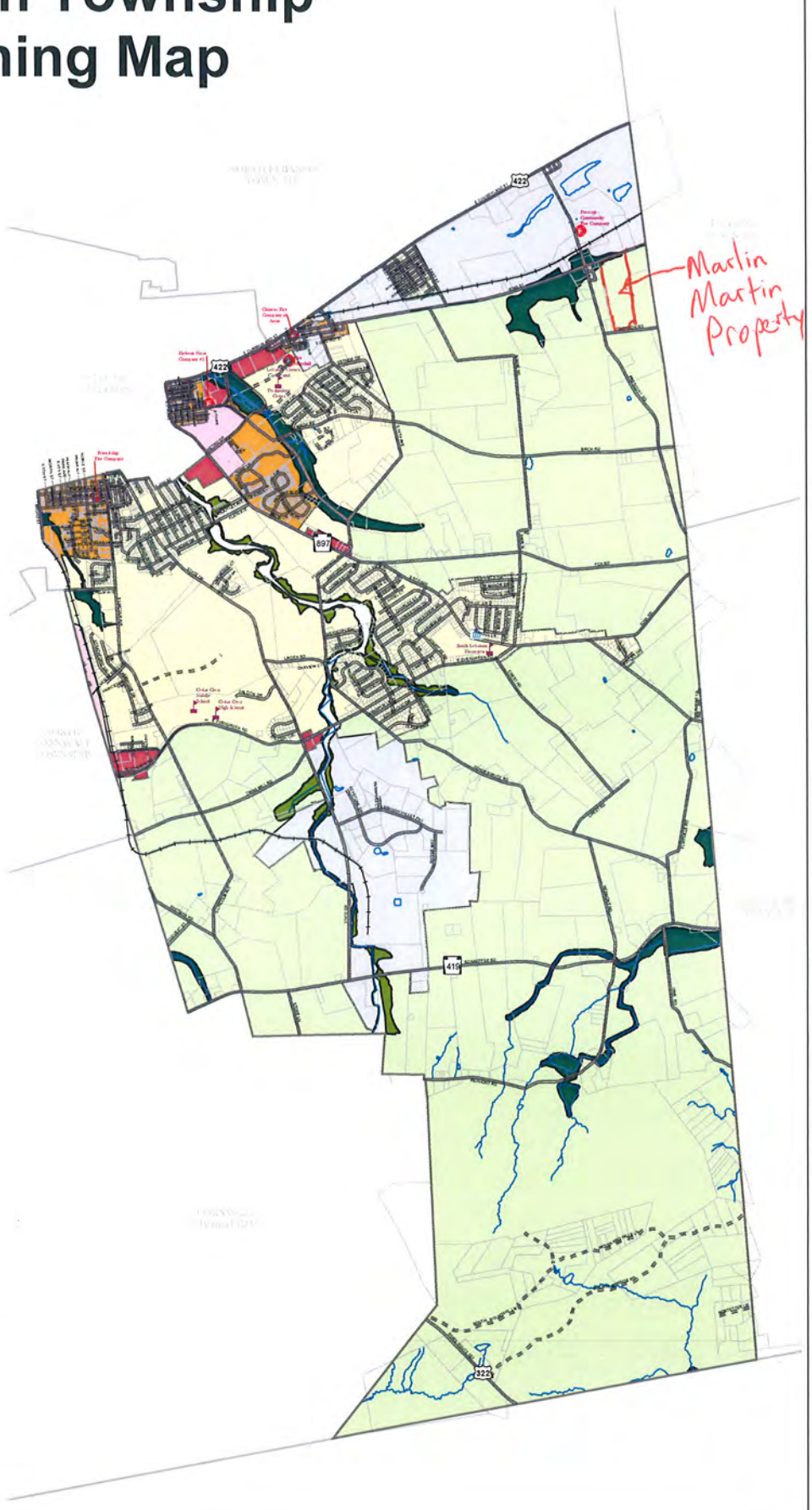
November 25, 2015

Calculation of Animal Equivalency Units (AEU's)

	Type of Livestock	Number	Ave. Wt.	Days/Year	AEU's
1	Broiler (existing)	31,500	3.00	270	69.90
2	Broiler (proposed)	83,000	3.00	270	184.19
3	Beef Steers (proposed)	2	950.00	365	1.90
4					0.00
5					0.00
6					0.00
7					0.00
8					0.00
9					0.00
10					0.00
11					0.00
12					0.00
13					0.00

Available Acreage	1			
(Tilled and pasture, owned and rented)		**Total AEU =**	**256.00**	
		AEU/acre =	**256.00**	**CAO**

South Lebanon Township
Official Zoning Map



N
W E
S

Legend

- A Agricultural
- R-1 Low Density Residential
- R-2 Medium Density Residential
- O&I Office & Institutional
- C General Commercial
- I Industrial

SPECIAL FLOOD HAZARD AREA

- ZONE A
- ZONE AE - FLOODWAY
- ZONE AE

0 2,400 4,800 7,200 Feet

Adopted 6/26/2012
Printed 1/29/2014

Produced by the Lebanon City Authority/County GIS Department

Disclaimer:
Tax maps show the approximate boundaries of taxable and non-taxable property. The property boundaries depicted should not be interpreted as the legal boundary description. The legal boundary description can be obtained from the property's deed.

PRODUCT DATA SHEET FOR BROILERS

Poultry Litter Treatment

The Science of Litter Management

PLT® litter acidifier has proven to be the most effective and economical litter treatment available, used in tens of thousands of commercial poultry houses around the world. PLT® creates a beneficial environment in the poultry house by controlling ammonia released from the litter and reducing litter pH levels, allowing birds to optimize their genetic potential. The ammonia bound by PLT® reduces environmental emissions and increases the nutrient value of poultry litter.

PHYSICAL DESCRIPTION

Appearance: Dry, white granular product. Odor: Slightly acidic, non-offensive.

USES

PLT® can be utilized with broilers, breeders, turkeys, commercial pullets and layers, quail, pheasants, ducks and any other litter-based operation.

PACKAGING

- 50 pound (25 kg) poly-vinyl bags
- 2,000 pound (2,200 metric ton) super sacks on pallet

APPLICATION

- PLT® is applied only once, as close to bird placement as possible.
- Due to its uniformity, PLT® application is quick and easy.
- Can be applied with any type of spreader.
- Commercial application is available in certain areas of the United States.
- Only litter amendment that can be safely applied with birds in the house.

BENEFITS

Ammonia Control/Fuel Savings

- Immediately binds ammonia in the treated area of the poultry house.
- Reduces urease production.
- Reduces ammonia released from the litter.
- Ammonia bound in the litter increases fertilizer value.

Litter Acidification

- Lowers the pH of poultry litter from an average 8.5 down to 1.5 on the pH scale.
- Acidifying litter dramatically improves litter ecology.

Safe Reuse of Litter

- Use of PLT® before each flock extends life of the litter.
- Saves the cost of new litter and cleanout.
- PLT®-treated litter is good for crops and the environment.
- Turns volatile ammonia into stable ammonium sulfate increasing the fertilizer value of the litter.

APPLICATION PROCEDURE FOR BROILERS

1. Close poultry house up tightly immediately after prior flock is moved. Ventilate only enough to prevent moisture condensation. This will help to release ammonia from the litter. Ventilate to remove ammonia when personnel are working in the house.
2. Remove caked and wet areas from the surface of the litter immediately after the last flock moves out. Do not disturb deep litter—DO NOT TILL.
3 Turn on brooders to preheat the litter to increase ammonia release from the litter prior to bird placement. The floor temperature should be a minimum of 85°F (30°C) for at least 48 hours. Heating the litter helps release ammonia and moisture stored in the litter before birds are placed.
4. Prepare houses as normal for chick placement.
5. If applying on built-up litter, then fifteen (15) minutes before PLT® application, open inlets fully and turn fans on OR drop sidewall curtains to exhaust ammonia as quickly as possible. Once ammonia gas is exhausted, turn fans off or close sidewall curtains. This prevents PLT® from being wasted on ammonia already released.
6. **PLT® litter acifidier ammonia control application rates:**
   • Broiler litter 1 year old or less: 75-100-lbs./1,000 sq. ft. (37-49 kg/100 m^2) of floor space
   • Broiler litter older than 1 year: 100-150-lbs./1,000 sq. ft. (49-73 kg/100 m^2) of floor space
   Extreme conditions such as windrowing or special circumstances may require higher application rates.
7. Apply PLT® on TOP OF THE LITTER EVENLY 2-24 hours prior to bird placement. A broadcast or drop spreader can be used to apply PLT®. DO NOT INCORPORATE PLT® INTO THE LITTER.
8. Ventilate house to maintain a relative humidity between 50% and 70% while the birds are in the brood chamber. This will help minimize ammonia production, improve longevity of PLT® and provide the optimum environment for the birds. Humidity above 70% will cause litter caking and increased ammonia production.
9 After bird placement, humidity will rise gradually. Check relative humidity levels frequently to control moisture and avoid **unnecessary over-ventilation**.
10. PLT® litter amendment activation is not dependent on litter temperature. Relative humidity of 50%-70% is recommended for proper activity.
11. PLT® can be safely applied or re-applied with birds in the house at any time.

PAD ACIDIFICATION

1. **Completely** clean out old litter from house. The thick dark, wet decayed litter on the floor MUST be removed. Corners and footings should be swept or shoveled if necessary.
2. Wash and disinfect house as desired. Allow time for dirt pad to dry completely. Disinfectants with an acidic pH are preferred.
3. Apply PLT® directly to surface of DRY dirt pad at rate of 100-150 lbs./1000 sq. ft. (49-73 kg/100 m^2)
4. If desired, apply insecticides to dirt pad during or after PLT® application.
5. Install dry bedding material.
6. Prepare house as normal for bird placement.

PROPER USE AFTER IN-HOUSE COMPOSTING OR WINDROWING

In order to maintain air quality and ammonia levels below 25 PPM during brooding, much higher rates of PLT® will be necessary to neutralize the high ammonia challenge created from windrowing litter. In general, PLT® application rates need to be increased by 50-100% over the normal rate for the house type and litter age. Houses that would normally use 75 lbs./1000 sq. ft. (37-49 kg/100 m^2) of PLT® should now use 125 lbs (57kg.). If your normal application rate is 100 lbs./1000 sq. ft. (49-73 kg/100 m^2) you should increase to 150-200 lbs./1000 sq. ft. (73-91 kg/100 m^2) in order to be able to counteract the high levels of ammonia being released when litter is leveled and pre-heated after windrowing.

PROPER STORAGE AND HANDLING INSTRUCTIONS

When applying PLT®, please wear the following protective items: Safety goggles, long pants with pant leg outside of boot or shoe, long sleeve shirt, gloves and dust mask. Store PLT® in a dry area and tightly re-seal open bags when storing. Be sure to prevent exposure from moisture prior to application. **DO NOT MIX** PLT® with liquid chlorine bleach, ammonia cleansers or similar products.

QUALITY AND SAFETY

- Non-hazardous per current U.S. Department of Transportation definition
- Produced following a Quality Management System certified to the ISO 9001:2008 Standard
- GMO-Free
- BSE-risk free material

30354 Tracy Road, Walbridge, Ohio 43465-9792 • Ph: 419.666.9838 • 888.858.4425 • Fax: 419.666.1817 • www.JonesHamiltonAg.com

Notes

Marlin Martin OMP

Map of:

2700 E King St

Lebanon, PA 17042-9176

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: December 23, 2015 **Agenda Item: B.2.b**

TO: Karl G. Brown, Executive Secretary
State Conservation Commission

FROM: Michael J. Walker, NM Regional Coordinator
State Conservation Commission

SUBJECT: Nutrient Management Plan Review (1)
Monroe County, Pennsylvania

Action Requested

Action on a Nutrient Management Plan for the following operation in Monroe County:

1. Bar-U-Farm – Harold Hauschild, located along SR 209 near Bushkill, PA with a mailing address of P.O. Box 782, Bushkill, PA 18324 (crop years 2016 through 2018)

Background

I have completed the required review of the subject nutrient management plan listed above. Final corrections to the plan were received at the PDA Region 2 office on December 11, 2015. As of that date, the plan was considered to be in its final form. The operation, located in Monroe County, is considered to be a concentrated animal operation (CAO) under the PA Nutrient and Odor Management Act. The Commission is the proper authority to take action on this plan, because Monroe County Conservation District has not been delegated plan review and action responsibilities (Level II) under the PA Nutrient and Odor Management Act Program.

A brief description of the operation, concluding with the staff recommendation, is attached. Also attached is a copy of the complete nutrient management plan for the operation.

Thank you for considering this plan for Commission action.

Farm Descriptions

Bar- U- Farm – Harold Hauschild NMP, Monroe County – Barn-U-Farm animal operation is operated by Harold Hauschild and is a horse riding stable having 20 horses and providing a horse riding services for the general public. Two of the horses are heavy draft horses. The operation consists of horse stables and a fenced animal concentration area (ACA) of less than half an acre in size. The ACA is utilized to hold horses that are not being utilized during normal business hours. All horses are return to the stall barn throughout non-business hours. Manure is removed from the stall barn daily and is stored in a roofed stacking facility on the north side of the property. Manure and sand from the ACA is planned to be removed four times per year by the importer. After the ACA is cleaned, the importer spreads approximately 100 tons of sand or gravel on the ACA. All manure is exported to a known importer, Bushkill Group and used as a soil amendment material around Fernwood Resort. Bushkill Group owns the property where this horse operation resides as well as the resort. The combined animal equivalent units of Bar-U-Farm animal operation are 25. There are no crops produced or land available for manure application on Bar-U-Farm and all feed is imported to this operation. The animal equivalent units per acre for Bar-U-Farm are 25.0, classifying the operation as a concentrated animal operation under Act 38 of 2005. Approximately 800 tons of manure is generated and exported from Bar-U-Farm each year.

The proposed NMP for Bar-U-Farm animal operation indicates that the following Best Management Practices are planned to be implemented – Follow cleanout schedule of ACA or Turnout area quarterly.

In closing, the operator has been very cooperative in addressing technical comments during the plan review process. Based on my review, the NMP for Bar-U-Farm - Harold Hauschild horse riding stable meets the requirements of the PA Nutrient Management Act and Regulations; I therefore recommend the plan for Commission approval.

FINAL FORM

This version of the plan could be considered for action by the [illegible] Conservation District board SCC at their January 22, 2016 meeting

December 11, 2015

MONTH, DAY AND YEAR

NON-FINAL FORM

Version _____

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to board action. You may contact the Conservation District to determine the current status of the NMP

10/26/2015

Month, Day and Year

Nutrient Management Plan

For Crop Years(s)
2016-2018

Prepared for

Bar-U-Farm / Harold Hauschild
P.O. Box 782
Bushkill, Pa. 18324

570-872-7311

Prepared by

Michael Farbotnik
1530
P.O. Box 44
Mechanicsville, Pa. 18934

215-266-7854

Date of Plan Submission

Oct. 26, 2015 December 11, 2015

Date(s) of Plan Update Submissions
(updates to approved plan not requiring board action)

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- Nutrient Management Plan Summary Notes
- Additional Nutrient Management Plan Requirements
- Operator Management Map

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Appendix 5: Phosphorus Index **N/A**

Appendix 6: Manure Management

Appendix 7: Stormwater Control

Appendix 8: Importer/Broker Agreements & Nutrient Balance Sheets

Appendix 9: Operation Maps
- Topographic Map
- Soils Map

Appendix 10: Supporting Information and Documentation **N/A**
- Rainfall Additions Worksheet **N/A**

Nutrient Management Plan Summary

Total acres reported in NMP Summary: _____ **Crop Year(s)** 2016-2018

Whole Farm Note: **There are no acres in this plan. All manure generated is to be removed by the Fernwood Resort to be composted and used on the resort.**

CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate	Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[1]			Notes (Select "Yes")
							N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	
No CMU	0	Select Crop	No Manure	No Manure	No Manure	0	0	0	0	#N/A	0	0				

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit;
Negative numbers = nutrient excess

Nutrient Management Plan Summary Notes

Crop Years. 2016-2018

CMU/Field ID	Notes
None	

Manure Spreader Calibration Notes

Manure Application Rate	Manure Spreader Used	Spreader Settings	Tractor Used (if applicable)	Tractor Settings (speed, gear, rpm, pto, etc.)
No manure spread	N/A	N/A	N/A	N/A

Additional Nutrient Management Plan Requirements

Manure Management and Stormwater BMP Implementation Summary

[1] - If applicable, enter USDA-NRCS Practice Code. For additional BMPs, enter the BMP description in the first blank cell.

Best Management Practice	NRCS Practice Code[1]	BMP Location	Implementation Season & Year
Follow cleanout schedule		Turn out area	every three months

In-Field Manure Stacking Procedures

Manure must be applied to the field within 120 days of stacking or the stacks must be covered. Stacks must be implemented and maintained according to sound BMPs, addressing concerns such as soil type, soil slope, shape of the pile, setbacks, and rotation of piles.

No in field stacking proposed

Additional CAFO Requirements

In-field stacking criteria, winter storage requirements, and other issues identified by DEP's review of the nutrient management plan.

N/A

Proposed Manure Storage Description

Type, dimensions, volume, freeboard and location on map.

None proposed

Description of Planned Alternative Manure Technology Practices

Type of practice, volume of manure addressed, and result of practice.

None proposed

Exported Manure Summary

Summarize in a short paragraph the arrangements proposed for the manure to be exported from the operation. This information is described in more detail in Appendix 8 of this plan.

All manure from this operation is exported to the adjacent hotel to be mixed with grass clippings, leaves and shrub trimmings to be used for mulch.

Operator Management Map

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Operator Management Map** is to be included here in the Nutrient Management Plan Summary and must include field identification, acreage and boundaries, manure application setback areas and buffers and associated landscape features (streams and other water bodies, sinkholes and active water wells), location of existing and proposed structural BMPs (including manure storage facilities), location of existing or proposed emergency manure stacking areas and in-field manure stacking areas, and road names adjacent to and within the operation. All features on the map must be clearly identified and include a legend for setback areas and other features. The Topographic Map and Soils Map must be included in Appendix 9.

Bushkill Stables

* 122.0 feet per inch

0 61 122 183 244 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 12/08/15

Appendix 1

Nutrient Management Plan Agreement & Responsibilities

Plan Implementation Requirements

This nutrient management plan has been developed to meet the requirements of the following programs:

- ☑ Pennsylvania Act 38 of 2005, Select one → ☑ CAO ☐ VAO
- ☐ Pennsylvania CAFO (Concentrated Animal Feeding Operation) program
- ☐ NRCS (Natural Resources Conservation Service) 590 Nutrient Management Standard
- ☐ NRCS CNMP (Comprehensive Nutrient Management Plan)
- ☐ Other program: _____

Plans developed under these programs are required to be implemented as approved in order to maintain compliance with the specific law or program. Implementation includes adherence to manure and fertilizer application rates, timing, setbacks and conditions; installation of listed BMPs within implementation timeframes; and recordkeeping obligations of the program.

The nutrient management plan has been developed as a: (check one)

- ☐ 1 - Year Plan for crop year _____ (annual updates will be completed)
- ☑ 3 - Year Plan for crops years 2016-2018

Records required to be maintained include the following:

1) Annual crop yields
2) Manure and fertilizer application rates, locations and date of application
3) Manure production figures for the various manure groups listed in your plan
4) Soil test reports (testing required every 3 years per crop management unit)
5) Manure test reports (testing required once a year for each manure group)
6) Number of animals on pasture, number of days on pasture, and hours per day on pasture
7) For operations exporting manure, Manure Export Sheets
8) BMP designs and certification for new liquid and semi-solid manure storage facilities

The following has been confirmed:

☑ Verification of Existing Site Specific Emergency Response Plan

☐ Verification that owners of rented/leased lands have been notified that a nutrient management plan has been developed which calls for manure to be applied to their lands and that they have no objections to the plan requirements.

☑ No rented/leased lands

Specialist Signature

I affirm that the information contained in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, based on information provided by the operator. This plan has been developed in accordance with the criteria established for the program(s) indicated above. I affirm that I have discussed the content and implementation of this plan with the operator.

Specialist Signature Michael Faubel

Date 10/13/15

Operator Agreement

I affirm that all information provided in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, and reflects the current and planned activities of the operation. I understand and affirm that I will implement the practices, procedures and record keeping obligations as outlined in this plan in order to protect water quality and address the nutrient needs of the crops associated with the operation. I affirm that if I use a commercial hauler or broker for the application or export of manure, that only haulers or brokers that hold a valid certification issued by the Pa Department of Agriculture, under Act 49 of 2004, will be used.

Operator's Signature Donald Heuschobel

Date 10-19-15

Operator's Title President

Appendix 2

Operation Information

Operation Description

Animal types and numbers; cropland, hayland and pastureland acreage; farmstead acreage; crop rotation (crops, sequence of crops, and number of years for each crop); manure group management, including atypical manure (contributing animal groups, collection, storage and handling procedures); mortality composting management.

This operation is a horse riding stable with up to 20 horses two of which are heavy drafts. No crops or hay are grown and no pastures are used. There are no crop rotations. Horses are fed purcahsed hay and grain. The manure is cleaned from the turn out paddock (HUA)multiple times per year and loaded on trucks for removal. As per records held at the Fernwood Resort, approximately 100 tons of sand and gravel are brought in to the HUA four times a year. This gravel and sand is brought in to replace the material that is removed during the scraping of the HUA. Manure from the barns is cleaned out and stored under roof along with the manure scraped from the HUA until removed. All manure is exported and used for mulch on the hotel grounds. Mortality is handled by removal of the animal for rendering. Total acreage of the operation is approximately 1 half of which is farmstead. The land on which this operation stands is leased from the owner Bushkill Group.

County(s)

Monroe

Name of Receiving Stream(s)/Watershed(s)

Sand Hill Creek to Bushkill Creek ultimately to the Delaware River.

Notation of Special Protection Waters

High quality cold water fishery.

Operation Acres

Total Acres: 1

Total Acres Available For Nutrient Application Under Operator's Control

Owned: 0

Rented: 0

Names & Addresses of Owners of Rented or Leased Land

No land is leased for the application of manure.

Animal Equivalent Units: 25

Animal Equivalent Units Per Acre: 25

Existing Manure Storages & Capacity

Type of storage, dimensions, useable capacity, freeboard, top or bottom loaded, dimensions and description of contributing runoff area, description of wastewater additions, types and amounts of bedding. Briefly describe, for each manure group, manure storage management during removal (degree of agitation, method of manure removal, extent the storage is emptied, type of unremoved manure, etc.) and manure sampling procedures. If additional space is needed, make a note and include the required information in Appendix 10.

A 16 x 18 x 3 covered manure storage shed is used for the storage of manure cleaned from the stalls and HUA. The capacity is approximately 17 tons.

Manure Application Equipment Capacity & Practical Application Rates

Description of application equipment, practical application rates based on calibration and calibration method used, the data recorded during equipment calibration is to be retained on the farm.

None needed

Appendix 3
Manure Group Information

When entering manure group information

Manure Group Identification	Horse Bedded Pack	
Manure Report Date (note if averaging several reports)	January 3, 2013	
Laboratory Name	Agri Analysis	
Manure Type	Other	
Manure Unit (lbs/ton or 1000 gal)	lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	14.4	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	3.4	
Total Organic N (lbs/ton or 1000 gal)	11.0	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	14.3	
Total Potash (K_2O) (lbs/ton or 1000 gal)	10.9	
Percent Solids	52.50	
PSC Value (Enter analytical or book value)	1.00	
Inventory Method	Records	
	Collected Calc.	Uncollected Calc.
Manure Group Identification	Horse Bedded Pack	
Description: Site & Season Applied	None applied	
CALCULATED: Total Manure Collected Per Manure Group		
Unit		
RECORDS: Total Manure Collected Per Manure Group	800	
Unit	Tons	
	Collected	Uncollected
Manure Used On-Farm	0	
Units	Tons	
Manure Allocation Balance	800	
Units	Tons	
Manure Exported	800	
Units	Tons	
Total Rainfall and Runoff	0	

	Manure Generation per Animal Group *	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 1	non draft horse	
Animal Type	Horse	
Animal Number	18	
Animal Weight	1100	
Animal Group AUs	19.8	
Animal Group AEUs	19.80	
Daily Manure Production per AU	55	
Total Days Manure Produced	365	
Total Manure Produced		
Days On Pasture	0	
Hours Per Day On Pasture	0	
Total Bedding		
Total Washwater		
CALCULATED - Total Uncollected Manure		
CALCULATED-Total Manure Collected Per Animal Group		

Animal Group 2	draft horse	
Animal Type	Horse	
Animal Number	2	
Animal Weight	2600	
Animal Group AUs	5.2	
Animal Group AEUs	5.20	
Daily Manure Production per AU	55	
Total Days Manure Produced	365	
Total Manure Produced		
Days On Pasture	0	
Hours Per Day On Pasture	0	
Total Bedding		
Total Washwater		
CALCULATED - Total Uncollected Manure		
CALCULATED-Total Manure Collected Per Animal Group		

App. 4: Crop Yrs. 2016-2018 CMU/Field ID	No CMU		
Acres			
Soil Test Report Date			
Laboratory Name			
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH
P Index Part A	No P Applied		
	No P Applied		
Crop	Select Crop		
Planned Yield			
Soil Test Recommendation (lb/Acre)	N	P2O5	K2O
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)			
P Index Application Method			
Manure History Description	Select a Residual Manure N Scenario		
Residual Manure N (lb/A)			
Legume History Description Residual Legume N (lb/A)	Select a Previous Legume N Scenario		
Net Nutrients Required (lb/A)			
Manure Group	Select a Manure Group		
Application Season Application Management (Incorporation, cover crops, etc.)	Select Manure Application Timing		Select Manure Application Method
Availability Factors (Total N or NH4-N & Organic N)	Total N	NH4-N	Org. N
P Index Application Method			
N Balanced Manure Rate (ton; gal/A)			
P Removal Balance Manure Rate (ton or gal/A; if required by P Index)			
P Index Value			
Planned Manure Rate (ton or gal/A)			
Nutrient Balance after Manure			
Supplemental Fertilizer (lb/A)			
P Index Application Method			
Final Nutrient Balance (lb/A)			
Manure Utilized on CMU			

Appendix 5

Phosphorus Index

The current Pennsylvania Phosphorus Index Spreadsheet for each field from Appendix 4 that required Part B of the P Index must be included here.

P index not applicable

	A	B	C	D	E	F
1	**Appendix 5 - P Index**		N/A			
2	Crop Yrs. 2016-2018					
3	Pennsylvania P Index Version 2		**PART A: SCREENING TOOL**			**CMU/Field ID**
4	Go to Appendix 4		Is the CMU in a Special Protection watershed?			If the answer is Yes to any of these questions, Part B must be used.
5	Go to NMP Index		Is there a significant farm management change as defined by Act 38? (see below)			
6	Go to Appendix 6		Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)			
7			Is the Contributing Distance from this CMU to receiving water less than 150 ft.?			
8			The following Act 38 criteria determine when there is a significant farm management change:			
9			1. net increase of greater than 10% in AEUs per acre			
10			2. a change in crop management that results in a farmwide reduction of greater than 20% in nitrogen necessa			
11			3. alternative organic sources will replace all or some of the nutrient sources listed in the plan			
12			4. additional lands are brought into the operation (purchased or rented)			
13	**PART B: SOURCE FACTORS**					**CMU/Field ID**
14	SOIL TEST	Mehlich 3 Soil Test P (ppm P)				
15						**Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)**
16	FERTILIZER P RATE					Fertilizer P (lb P2O5/acre)
17	FERTILIZER APPLICATION METHOD	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil
18						**Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method**
19	MANURE P RATE					Manure P (lb P2O5/acre)
20	MANURE APPLICATION METHOD	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil
21	P SOURCE COEFFICIENT	Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1				
22						**Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient**
23						**Source Factor Sum**
24	**PART B: TRANSPORT FACTORS**					**CMU/Field ID**
25	EROSION	Soil Loss (ton/acre/yr)				
26	RUNOFF POTENTIAL	0 *Drainage Class is* Excessively	2 *Drainage Class is* Somewhat Excessively	4 *Drainage Class is* Well/Moderately Well	6 *Drainage Class is* Somewhat Poorly	8 *Drainage Class is* Poorly/Very Poorly
27	SUBSURFACE DRAINAGE	0 None		1 Random		2 * Patterned
28	CONTRIBUTING DISTANCE	0 > 500 ft.	2 350 to 500 ft.	4 200 to 349 ft.	6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer	9 ‡ < 100 ft.
29						**Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance**
30	MODIFIED CONNECTIVITY	0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT		1.0 Grassed Waterway or None		1.1 Direct Connection APPLIES TO DIST > 100 FT
31	* OR rapidly permeable soil near a stream					**Transport Sum x Modified Connectivity / 24**
32	‡ "9" factor does not apply to fields receiving manure with a 35 ft. buffer.					**P Index Value = 2 x Source x Transport**

Appendix 6

Manure Management

Date of Site Evaluation June 14, 2015

Statement Documenting Areas Evaluated During Site Evaluation

During this site visit, the following areas were evaluated: Turn out paddock, stables and manure storage area.

Identification of Inadequate Manure Management Practices and Conditions

None noted. Cleanout schedule was being followed.

BMPs to Address Manure Management Problem Areas

None needed.

Appendix 7

Stormwater Control

Date of Site Evaluation June 14, 2015

Statement Documenting Areas Evaluated During Site Evaluation

There is no cropland or hayland on this operation, and so there are no Critical Runoff Problem Areas.

Identification of Critical Runoff Problem Areas

Not Applicable

BMPs to Address Critical Runoff Problem Areas

Not Applicable

Appendix 8

Importer/Broker Agreements & NBSs

Nutrient Balance Sheets are not required for importers that have an approved Nutrient Management Plan.

Exporter/Importer Agreement

Manure Used For Other Than Agricultural Land Application

Developed consistent with the PA Nutrient and Odor Management Act Program

1) This agreement is entered into on 10-19-15, by Harold Hauschild (the "exporter") who will supply manure, and Fernwood Resort (the "importer"), who will receive the manure from the exporter.

2) The purpose of this agreement is to set forth the mutual responsibilities and understanding of the parties with respect to the export of manure from the exporter to the importer.

3) The exporter is located at (county, twp, and address): Rt 209, P.O. Box 782, Bushkill, Pa. 18342 Monroe County

4) The exporter will, as the supply of manure allows, provide the following amounts of manure during the seasons outlined below:

Tons of *(Species)* manure, per season:

Spring 163.25 horse Summer 163.25 horse Fall 163.25 horse Winter 163.25 horse

Gallons of *(Species)* manure, per season:

Spring 200 ~~163.25~~ **Summer** ~~163.25~~ 200 **Fall** 200 ~~163.25~~ **Winter** 200 ~~163.25~~

Total planned manure exported: (supply of manure may be less than what is planned)

Tons of *(Species)* manure: 653 tons horse
Gallons of *(Species)* manure: _____

If multi-species are planned, please add additional lines:

5) The importer's location and other relevant information as it relates to this manure export, is as follows:

a) **Phone number**: 570-588-6661

b) **County(s)**: Monroe

c) **Address**: 2157 River Road, East Stroudsburg, Pa. 18302

d) **Owner of the property receiving manure**: Fernwood Resort

e) **Proposed usage of the imported manure**: Compost to be used in flower beds, etc.

6) The exporter will use a Manure Export Sheet to record all manure exported to the importer. These Manure Export Sheets are available from the county conservation district or the State Conservation Commission. Computer generated forms other than the manure export sheet may be used if they

contain the same information as, and are reasonably similar in format to, the forms available from the State Conservation Commission or the conservation district.

7) Records relating to the export of manure shall be prepared by the exporter in accordance with the following requirements of the Nutrient and Odor Management Act regulations:
   a) A Manure Export Sheet shall be used to document all manure exports for their records
      - A copy of the Manure Export Sheet shall be provided to the importer
      - A copy of the Manure Export Sheet shall be retained on site by the exporter

   b) Records shall be maintained by the exporter for a minimum of 3 years

8) Where applicable, the importer shall properly store manure received from the exporter in accordance with the provisions of the Manure Management Manual and the Pa Technical Guide and shall not cause contamination of surface or ground water. This shall include manure stacked in application fields which may not be retained in fields for greater than 120 days unless covered or otherwise protected.

9) This agreement shall remain in full effect unless terminated by either party upon thirty days prior written notice to the other party. If this agreement is terminated, the exporter shall notify the county conservation district office that approved their nutrient management plan, of the termination.

Exporter Signature, Name and Date

Harold Hurschild (signature)

_____ (name)

10-19-15 (date)

Importer Signature, Name and Date

_____ (signature)

PETE STEFFEN (name)

11/03/15 (date)

Appendix 9

Operation Maps

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Topographic Map and Soils Map** must be included here. The Topographic Map must be drawn to scale and identify the land included in the plan with operation boundaries. The Soils Map must include field identification and boundaries, soils types and slopes with soils legend. Adding P Index lines can be helpful on the Topographic or Soils Map, but are not required. The Operator Management Map must be included in the Nutrient Management Plan Summary.

PENNSTATE

PaOneStop Farm Planning System

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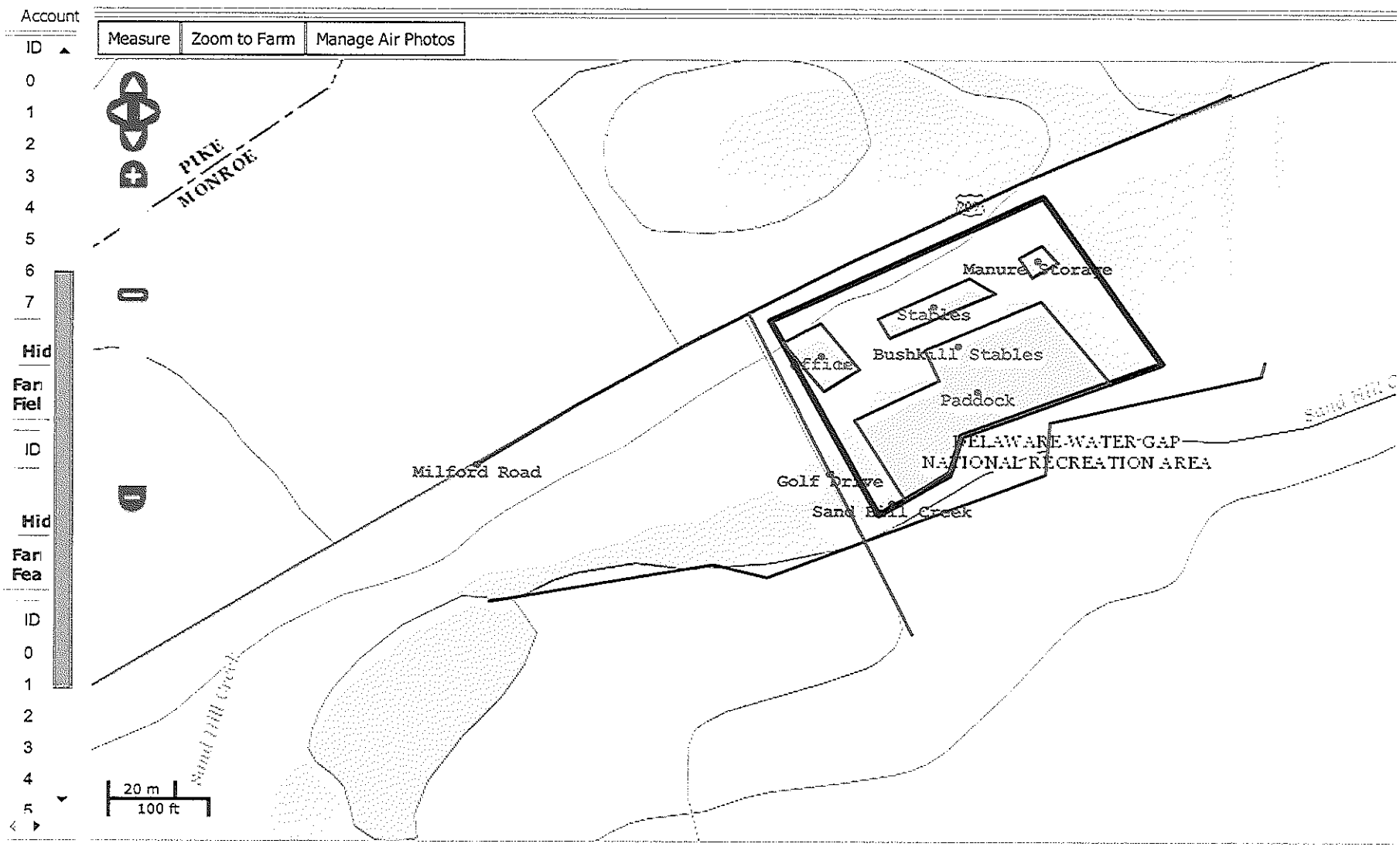
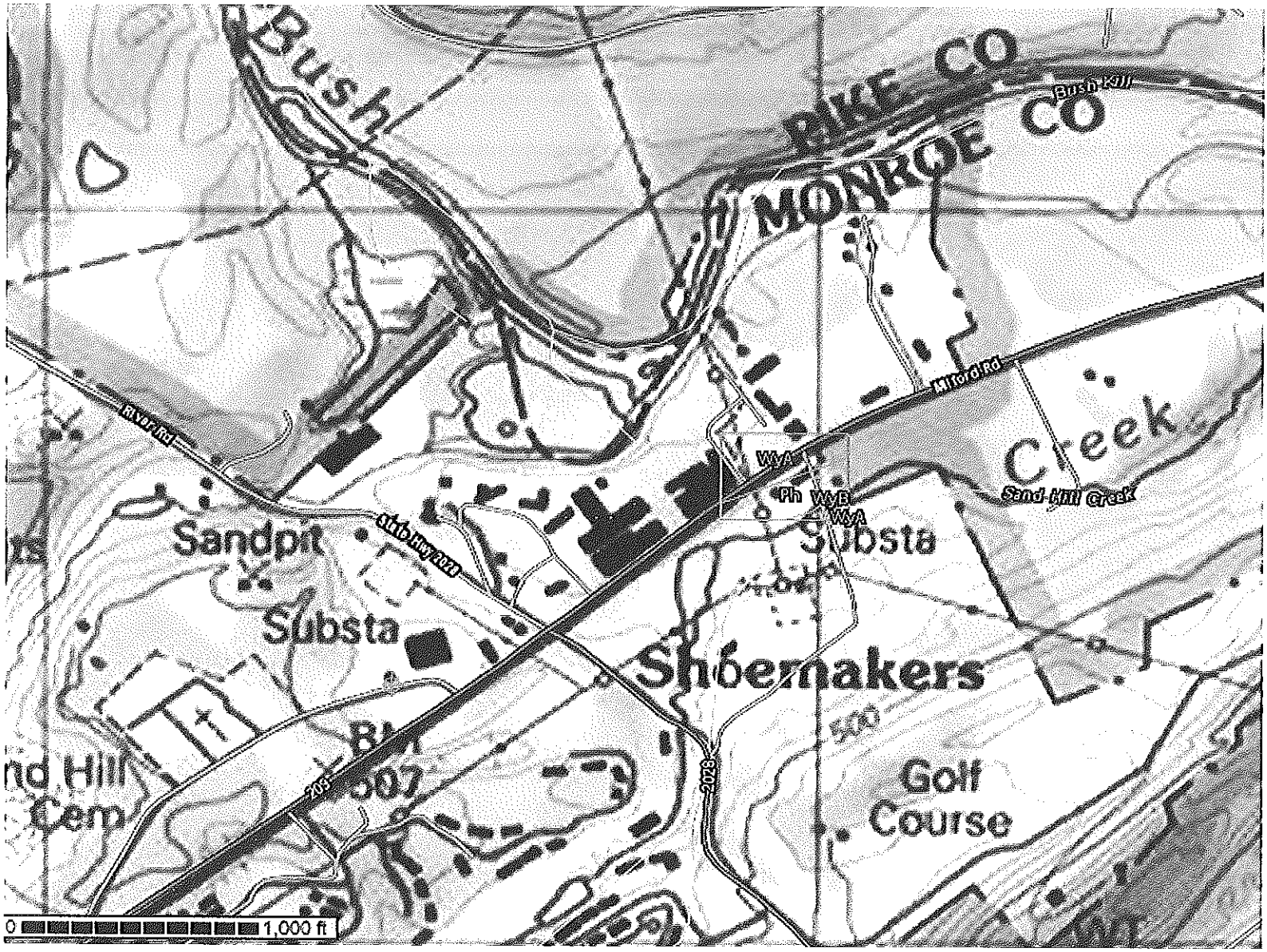
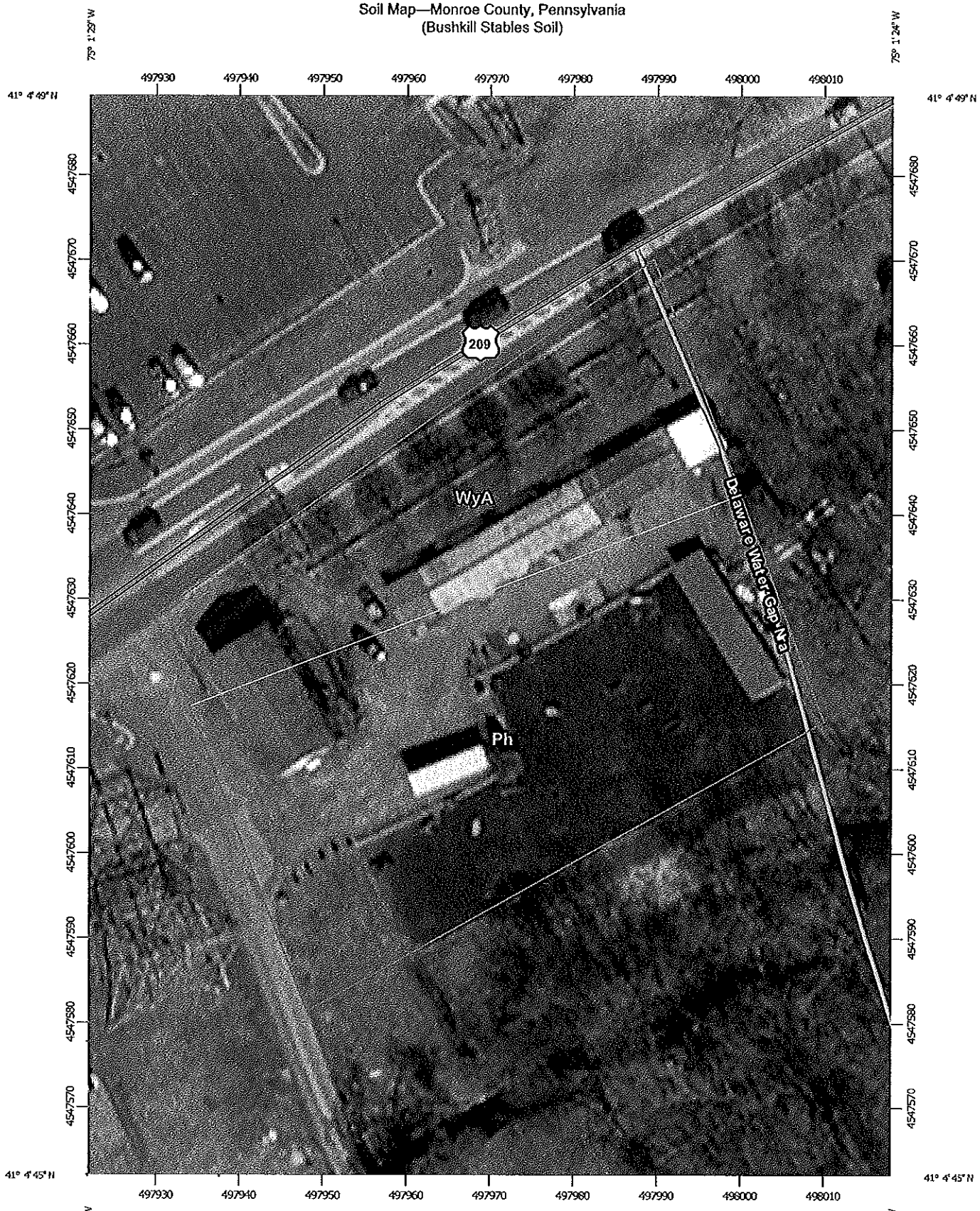




Bushkill Stables Topographic Map

Soil Map—Monroe County, Pennsylvania
(Bushkill Stables Soil)



Map Scale: 1:621 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 5 10 20 30

Feet
0 30 60 120 180

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

Map Unit Legend

Monroe County, Pennsylvania (PA089)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ph	Philo silt loam	0.6	61.9%
WyA	Wyoming gravelly sandy loam, 0 to 3 percent slopes	0.4	38.1%
Totals for Area of Interest		**0.9**	**100.0%**

Agenda item B.2.c

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: December 31, 2015

TO: Karl G. Brown, Executive Secretary
State Conservation Commission

FROM: Michael J. Walker, NM Regional Coordinator
State Conservation Commission

SUBJECT: Nutrient Management Plan Review (1)
Monroe County, Pennsylvania

Action Requested

Action on a Nutrient Management Plan for the following operation in Monroe County:

1. Mountain Creek Riding Stable, Inc. – Mark Ecker, located at 6190 Paradise Valley Road, Cresco, PA 18326 (crop years 2016 through 2018)

Background

I have completed the required review of the subject nutrient management plan listed above. Final corrections to the plan were received at the PDA Region 2 office on December 16, 2015. As of that date, the plan was considered to be in its final form. The operation, located in Monroe County, is considered to be a concentrated animal operation (CAO) under the PA Nutrient and Odor Management Act. The Commission is the proper authority to take action on this plan, because Monroe County Conservation District has not been delegated plan review and action responsibilities (Level II) under the PA Nutrient and Odor Management Act Program.

A brief description of the operation, concluding with the staff recommendation, is attached. Also attached is a copy of the complete nutrient management plan for the operation.

Thank you for considering this plan for Commission action.

Farm Descriptions

Mountain Creek Riding Stables, Inc. NMP, Monroe County – The Mountain Creek Riding Stables is located on land owned by Paradise Stream Prop Co, LLC and the animal operation is operated by Mark Ecker. Mountain Creek is an equine riding facility located along SR 940 and just east of Mount Pocono, PA. This operation consists of a 28 horse stall barn, two animal concentration areas (ACA1 and ACA2) and 4.3 acres of pasture. The operation currently keeps approximately 28 horses throughout the summer months and 20 horses in the winter. The operation utilizes riding trails on property owned my Paradise Stream Prop Co, LLC and is open throughout the year. The submitted NMP indicates that horses are houses or kept in a 28 standing stall barn for cleaning and preparing for riders and also retained in ACA1 awaiting riders during business hours. During non-working hours the horses are taken to the upper part of the operation where ACA2 and a 4.3 acre pasture exist. Horse's access to the pasture is dependent on pasture conditions and weather. Manure is handed as a solid form on this operation and is removed from the stalls daily. ACA1 is scrapped weekly and ACA2 is cleaned biannually. All collected manure is stacked on an existing 18' by 18' stacking site and/or exported directly to importers. All collected manure is exported off the operation at least 4 times per year to a known importer. Manure is also given away in small quantities, when requested. All exported manure is used for alternative uses and as a soil amendment material. The known importer operates a landscaping business and allows the manure to composter for approximately 6 months and then mixes it with screened soil and possibly other materials for a soil amendment material. Approximately 317 tons of manure is generated from Mountain Creek Riding Stable per year. Approximately 222 tons are exported to the known landscaper. The remaining 95 tons is animal applied to the associated pastures or trails.

The combined animal equivalent units at Mountain Creek Riding Stables, LLC are 30.8. The crop production acres associated with this operation (one pasture) are approximately 4.3 acres. The majority of the feed and bedding are brought on to the operation from outside operators. The animal equivalent units per acre for Mountain Creek Riding Stable operation are 7.16, classifying this operation as a concentrated animal operation under Act 38 of 2005.

The proposed NMP for Mountain Creek Riding Stables, LLC indicates needed BMPs to be implemented on the operation, namely – 50 feet vegetative buffer along two streams around ACA1 and a diversion to redirect upslope stormwater away from ACA1. I have informed the operator that he should consider requesting assistance from USDA, NRCS for technical and possible financial assistance to implement these practices. These practices will allow for better collection of nutrients on the operation and better overall management of this horse riding operation.

Based on my review, the NMP developed for Mountain Creek Riding Stables, LLC – Mark Ecker operation meets the requirements of the PA Act 38 Nutrient Management Regulations, and I therefore recommend Commission approval.

FINAL FORM
This version of the plan will be considered for action by the Conservation District Board at their January 22, 2016 meeting
December 16, 2015
MONTH, DAY AND YEAR

SLC

RECEIVED
Pennsylvania Department of Agriculture
OCT - 2 2015
Region 2 Office
Montoursville, PA

Nutrient Management Plan

For Crop Years(s)
2016-2018

Prepared for

NON-FINAL FORM
Version 1
This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP
10/2/2015
Month, Day and Year

Mountain Creek Riding Stable, Inc.
Mark Ecker
6190 Paradise Valley Road
Cresco, PA 18326
570-977-2945

Prepared by

Stephanie Stolpe
1419-NMC
5550 Quakake Road
Weatherly, PA 18255

570-956-3149

Date of Plan Submission

10/2/2015, 12/16/2015

Date(s) of Plan Update Submissions
(updates to approved plan not requiring board action)

Table of Contents

Nutrient Management Plan Summary
- Nutrient Management Plan Summary Notes
- Additional Nutrient Management Plan Requirements
- Operator Management Map

Appendix 1: Nutrient Management Plan Agreement & Responsibilities
Appendix 2: Operation Information
Appendix 3: Manure Group Information
Appendix 4: Crop and Manure Management Information
Appendix 5: Phosphorus Index
Appendix 6: Manure Management
Appendix 7: Stormwater Control
Appendix 8: Importer/Broker Agreements & Nutrient Balance Sheets
Appendix 9: Operation Maps
- Topographic Map
- Soils Map

Appendix 10: Supporting Information and Documentation
- Rainfall Additions Worksheet

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 4.3 **Crop Year(s)** 2016-2018

Whole Farm Note: **If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.**

CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate	Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[1]			Notes (Select "Yes")
							N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	
Pasture	4.3	Pasture	Horse - uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing See Notes	0	0	0	86	0	0	0	-110	-198	Yes

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit;
Negative numbers = nutrient excess

Nutrient Management Plan Summary Notes

Crop Years. 2016-2018

CMU/Field ID	Notes
Pasture	Graze 28 horses for 11 hours per day or the equivalent, Spring through Fall (approximately 245 days)

Manure Spreader Calibration Notes

Manure Application Rate	Manure Spreader Used	Spreader Settings	Tractor Used (if applicable)	Tractor Settings (speed, gear, rpm, pto, etc.)
Not Applicable				

Additional Nutrient Management Plan Requirements

Manure Management and Stormwater BMP Implementation Summary

[1] - If applicable, enter USDA-NRCS Practice Code. For additional BMPs, enter the BMP description in the first blank cell.

Best Management Practice	NRCS Practice Code[1]	BMP Location	Implementation Season & Year
50' Vegetated Buffer	393	Downslope of lower ACA	Fall 2015
Diversion	362	Upslope of lower ACA	Fall 2015

In-Field Manure Stacking Procedures

Manure must be applied to the field within 120 days of stacking or the stacks must be covered. Stacks must be implemented and maintained according to sound BMPs, addressing concerns such as soil type, soil slope, shape of the pile, setbacks, and rotation of piles.

Not Applicable

Additional CAFO Requirements

In-field stacking criteria, winter storage requirements, and other issues identified by DEP's review of the nutrient management plan.

Not Applicable

Proposed Manure Storage Description

Type, dimensions, volume, freeboard and location on map.

None

Description of Planned Alternative Manure Technology Practices

Type of practice, volume of manure addressed, and result of practice.

Not Applicable

Exported Manure Summary

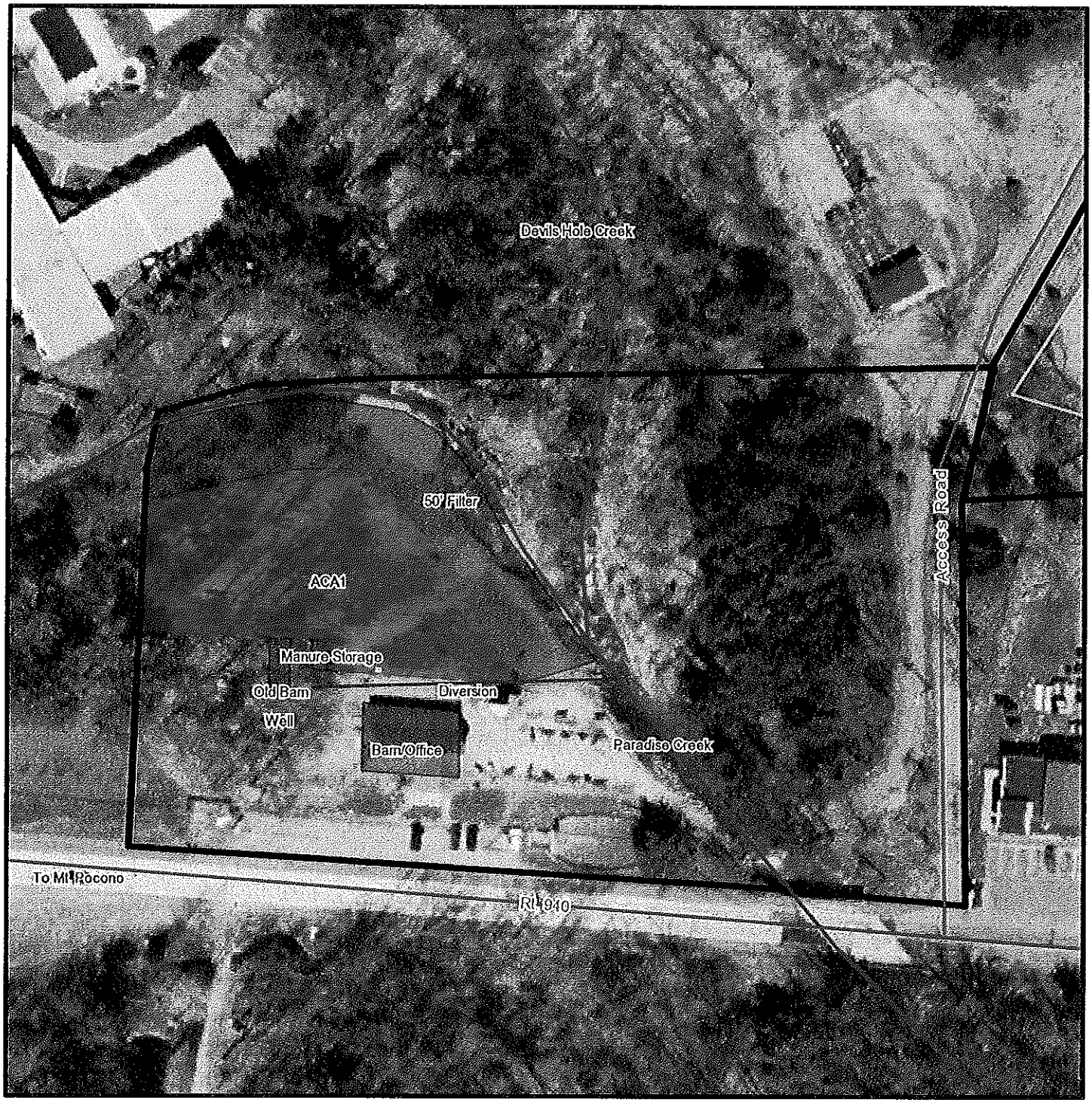
Summarize in a short paragraph the arrangements proposed for the manure to be exported from the operation. This information is described in more detail in Appendix 8 of this plan.

Manure is exported from the operation for lanscaping and in small quantities by neighbors for gardens.

Operator Management Map

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Operator Management Map** is to be included here in the Nutrient Management Plan Summary and must include field identification, acreage and boundaries, manure application setback areas and buffers and associated landscape features (streams and other water bodies, sinkholes and active water wells), location of existing and proposed structural BMPs (including manure storage facilities), location of existing or proposed emergency manure stacking areas and in-field manure stacking areas, and road names adjacent to and within the operation. All features on the map must be clearly identified and include a legend for setback areas and other features. The Topographic Map and Soils Map must be included in Appendix 9.

Mt. Creek Riding Stable Operation Map 1 of 2



* 98.0 feet per inch

0 49 98 147 196 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

Mt. Creek Riding Stable Operation Map 2 of 2

* 164.0 feet per inch

0 82 164 246 328 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

N

Field Acreages

Field	Label	Description	Acres	Suitable Acres
Pasture	Pasture 4.3		4.27	4.27
		Totals	**4.27**	**4.27**

Appendix 1

Nutrient Management Plan Agreement & Responsibilities

Plan Implementation Requirements

This nutrient management plan has been developed to meet the requirements of the following programs:

- ☑ Pennsylvania Act 38 of 2005, Select one → ☑ CAO ☐ VAO
- ☐ Pennsylvania CAFO (Concentrated Animal Feeding Operation) program
- ☐ NRCS (Natural Resources Conservation Service) 590 Nutrient Management Standard
- ☐ NRCS CNMP (Comprehensive Nutrient Management Plan)
- ☐ Other program: _____

Plans developed under these programs are required to be implemented as approved in order to maintain compliance with the specific law or program. Implementation includes adherence to manure and fertilizer application rates, timing, setbacks and conditions; installation of listed BMPs within implementation timeframes; and recordkeeping obligations of the program.

The nutrient management plan has been developed as a: (check one)

- ☐ 1 - Year Plan for crop year _____ (annual updates will be completed)
- ☑ 3 - Year Plan for crops years 2016-2018

Records required to be maintained include the following:

1) Annual crop yields
2) Manure and fertilizer application rates, locations and date of application
3) Manure production figures for the various manure groups listed in your plan
4) Soil test reports (testing required every 3 years per crop management unit)
5) Manure test reports (testing required once a year for each manure group)
6) Number of animals on pasture, number of days on pasture, and hours per day on pasture
7) For operations exporting manure, Manure Export Sheets
8) BMP designs and certification for new liquid and semi-solid manure storage facilities

The following has been confirmed:

☑ Verification of Existing Site Specific Emergency Response Plan

☑ Verification that owners of rented/leased lands have been notified that a nutrient management plan has been developed which calls for manure to be applied to their lands and that they have no objections to the plan requirements.

☐ No rented/leased lands

Specialist Signature

I affirm that the information contained in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, based on information provided by the operator. This plan has been developed in accordance with the criteria established for the program(s) indicated above. I affirm that I have discussed the content and implementation of this plan with the operator.

Specialist Signature Stephanie Stolpe

Date September 24, 2015

Operator Agreement

I affirm that all information provided in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, and reflects the current and planned activities of the operation. I understand and affirm that I will implement the practices, procedures and record keeping obligations as outlined in this plan in order to protect water quality and address the nutrient needs of the crops associated with the operation. I affirm that if I use a commercial hauler or broker for the application or export of manure, that only haulers or brokers that hold a valid certification issued by the Pa Department of Agriculture, under Act 49 of 2004, will be used.

Operator's Signature _____

Date 9/24/2015

Operator's Title President, Mt. Creek Stable, Inc.

Appendix 2

Operation Information

Operation Description

Animal types and numbers; cropland, hayland and pastureland acreage; farmstead acreage; crop rotation (crops, sequence of crops, and number of years for each crop); manure group management, including atypical manure (contributing animal groups, collection, storage and handling procedures); mortality composting management.

Mountain Creek Riding Stable, Inc. keeps up to 28 horses in the summer and 20 horses in the winter. Working hours are from 8am to 6pm (occasionally to 8pm) in the Spring through Fall months and from 9am to 5pm in the winter. During non-working hours the horses are on an ACA2 and/or pastured 500 feet to the northeast of the operation. During working hours the horses are brought down to a barn with 28 standing stalls for cleaning and prepared for riders. The horses are kept in ACA1 directly behind the barn and/or tied out while waiting for riders. There is 4.3 acres of permanent pasture and 7.6 acres of farmstead. There is no cropland or hayland. All collected manure is removed for landscaping purposes and by small importers for gardens. ACA1 is scraped weekly of manure and stored in the manure storage. ACA2 is scraped biannually and manure is immediately exported. Dead horses are removed to the landfill. Mountain Creek Riding Stable, Inc. is operated on leased property.

County(s)

Monroe

Name of Receiving Stream(s)/Watershed(s)

Paradise Creek, Devil's Hole Creek/Broadhead Creek

Notation of Special Protection Waters

Paradise Creek-HQ, Devil's Hole Creek-HQ

Operation Acres

Total Acres: 12

Total Acres Available For Nutrient Application Under Operator's Control

Owned: 0

Rented: 4.3

Names & Addresses of Owners of Rented or Leased Land

Paradise Stream PropCo, LLC
Route 940
Mt. Pocono, PA 18344

Animal Equivalent Units: 30.8

Animal Equivalent Units Per Acre: 7.16

Existing Manure Storages & Capacity

Type of storage, dimensions, useable capacity, freeboard, top or bottom loaded, dimensions and description of contributing runoff area, description of wastewater additions, types and amounts of bedding. Briefly describe, for each manure group, manure storage management during removal (degree of agitation, method of manure removal, extent the storage is emptied, type of unremoved manure, etc.) and manure sampling procedures. If additional space is needed, make a note and include the required information in Appendix 10.

An area of 18' x 18' x 4' is used to pile manure with a capacity of approximately 17 cubic yards. There is no wastewater or contributing runoff additions. Manure is sampled by mixing sub-samples from varying areas and depths within the manure storage. Eight tons of wood pellet bedding is used annually.

Manure Application Equipment Capacity & Practical Application Rates

Description of application equipment, practical application rates based on calibration and calibration method used, the data recorded during equipment calibration is to be retained on the farm.

Not Applicable

Appendix 3
Manure Group Information

When entering manure group information

Manure Group Identification	Horse	
Manure Report Date (note if averaging several reports)	August 18, 2015	
Laboratory Name	AASL	
Manure Type	Other	
Manure Unit (lbs/ton or 1000 gal)	lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	14.9	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	0.2	
Total Organic N (lbs/ton or 1000 gal)	14.7	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	7.6	
Total Potash (K_2O) (lbs/ton or 1000 gal)	8.6	
Percent Solids	74.90	
PSC Value (Enter analytical or book value)	0.80	
Inventory Method	Calculated	
	Collected Calc.	**Uncollected Calc.**
Manure Group Identification	Horse	Horse - uncollected
Description: Site & Season Applied	Exported	
CALCULATED: Total Manure Collected Per Manure Group	222	95
Unit	Tons	Tons
RECORDS: Total Manure Collected Per Manure Group		
Unit		
	Collected	**Uncollected**
Manure Used On-Farm	0	95
Units	Tons	Tons
Manure Allocation Balance	222	0
Units	Tons	Tons
Manure Exported	222	
Units	Tons	

Total Rainfall and Runoff	0

	Manure Generation per Animal Group *	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 1	Horse	Horse - uncollected
Animal Type	Horse	Total Nitrogen (N) (lbs/ton or 1000 gal)
Animal Number	28	12.00
Animal Weight	1100	Total Phosphate (P2O5) (lbs/ton or 1000 gal)
Animal Group AUs	30.8	5.00
Animal Group AEUs	30.80	Total Potash (K2O) (lbs/ton or 1000 gal)
Daily Manure Production per AU	55	9.00
Total Days Manure Produced	365	PSC Value
Total Manure Produced	309	0.80
Days On Pasture	245	
Hours Per Day On Pasture	11	
Total Bedding	8	
Total Washwater	0	
CALCULATED - Total Uncollected Manure	95	
CALCULATED-Total Manure Collected Per Animal Group	222	

App. 4: Crop Yrs. 2016-2018 CMU/Field ID	Pasture		
Acres	4.3		
Soil Test Report Date	August 12, 2015		
Laboratory Name	AASL		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH
	126	200	6.0
P Index Part A	Spec. Prot. Watershed		
	Part B		
Crop	Pasture		
Planned Yield	3 ton/A		
Soil Test Recommendation (lb/Acre)	N	P2O5	K2O
	150	0	0
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)			
P Index Application Method			
Manure History Description	Continuously - Winter Crop		
Residual Manure N (lb/A)	11		
Legume History Description Residual Legume N (lb/A)	Select a Previous Legume N Scenario		
Net Nutrients Required (lb/A)	139	0	0
Manure Group	Horse - uncollected		
Application Season Application Management (Incorporation, cover crops, etc.)	Grazing		Grazing anytime with nutrient uptake during growing season
Availability Factors (Total N or NH4-N & Organic N)	Total N	NH4-N	Org. N
	0.20		
P Index Application Method	Surface app. when frozen/snow covered		
N Balanced Manure Rate (ton; gal/A)	57.9 tons/A		
P Removal Balance Manure Rate (ton or gal/A; if required by P Index)	9 tons/A		
	Crop P Removal (lb/A)		45.0
P Index Value	50		
Planned Manure Rate (ton or gal/A)	22 ton/A		
Nutrient Balance after Manure	86	-110	-198
Supplemental Fertilizer (lb/A)	86	0	0
P Index Application Method			
Final Nutrient Balance (lb/A)	0	-110	-198
Manure Utilized on CMU	95 tons		

Appendix 5

Phosphorus Index

The current Pennsylvania Phosphorus Index Spreadsheet for each field from Appendix 4 that required Part B of the P Index must be included here.

Appendix 5 - P Index

Crop Yrs. 2016-2018

Pennsylvania P Index Version 2

Go to Appendix 4
Go to NMP Index
Go to Appendix 6

PART A: SCREENING TOOL

	CMU/Field ID	Pasture
Is the CMU in a Special Protection watershed?	If the answer is Yes to any of these questions, Part B must be used.	Yes
Is there a significant farm management change as defined by Act 38? (see below)		No
Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)		126
Is the Contributing Distance from this CMU to receiving water less than 150 ft.?		No

The following Act 38 criteria determine when there is a significant farm management change:

1. net increase of greater than 10% in AEUs per acre
2. a change in crop management that results in a farmwide reduction of greater than 20% in nitrogen necessary for realistic expect
3. alternative organic sources will replace all or some of the nutrient sources listed in the plan
4. additional lands are brought into the operation (purchased or rented)

PART B: SOURCE FACTORS

						CMU/Field ID	Pasture
SOIL TEST	Mehlich 3 Soil Test P (ppm P)						126
						Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	25
FERTILIZER P RATE						Fertilizer P (lb P2O5/acre)	0
FERTILIZER APPLICATION METHOD	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil		None,None
						Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method	0
MANURE P RATE						Manure P (lb P2O5/acre)	110
MANURE APPLICATION METHOD	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil		1
P SOURCE COEFFICIENT	Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1						0.8
						Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient	88
						Source Factor Sum	113

PART B: TRANSPORT FACTORS

						CMU/Field ID	Pasture
EROSION	Soil Loss (ton/acre/yr)						0.83
RUNOFF POTENTIAL	0 *Drainage Class is* Excessively	2 *Drainage Class is* Somewhat Excessively	4 *Drainage Class is* Well/Moderately Well	6 *Drainage Class is* Somewhat Poorly	8 *Drainage Class is* Poorly/Very Poorly		4
SUBSURFACE DRAINAGE	0 None		1 Random		2 Patterned		0
CONTRIBUTING DISTANCE	0 > 500 ft.	2 350 to 500 ft.	4 200 to 349 ft.	6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer	8 < 100 ft.		0
						Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance	5
MODIFIED CONNECTIVITY	0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT		1.0 Grassed Waterway or None		1.1 Direct Connection APPLIES TO DIST > 100 FT		1.1
						Transport Sum x Modified Connectivity / 24	0.22
						P Index Value = 2 x Source x Transport	50

" OR rapidly permeable soil near a stream

" "8" factor does not apply to fields receiving manure with a 35 ft. buffer.

Appendix 6

Manure Management

Date of Site Evaluation September 4, 2015

Statement Documenting Areas Evaluated During Site Evaluation

Areas evaluated during site visit include barn, manure storage area and animal concentration areas.

Identification of Inadequate Manure Management Practices and Conditions

Upslope stormwater from the driveway is entering the lower ACA1. Manure storage area is located within 100' of a well. The buffer between the stream animal concentration area (ACA) located behind the barn had some bare areas

BMPs to Address Manure Management Problem Areas

The operation was in existance prior to October 1, 1997. The solid manure storage was visually inspected and found to not be causing problems with leakage. A 50' filter strip (393) will be reseeded between the ACA and the stream (Fall 2015). A diversion (363) between ACA1 and the barn will be used to direct stormwater from the parking area around ACA1.

Appendix 7

Stormwater Control

Date of Site Evaluation September 4, 2015

Statement Documenting Areas Evaluated During Site Evaluation

Areas evaluated during the site visit include the 4.3 acre pasture.

Identification of Critical Runoff Problem Areas

None

BMPs to Address Critical Runoff Problem Areas

Not Applicable.

Appendix 8

Importer/Broker Agreements & NBSs

Nutrient Balance Sheets are not required for Importers that have an approved Nutrient Management Plan.

Exporter/Importer Agreement

Manure Used For Other Than Agricultural Land Application

Developed consistent with the PA Nutrient and Odor Management Act Program

1) This agreement is entered into on December 29, 2012, by Mt. Creek Riding Stable, LLC (the "exporter") who will supply manure, and Flood's Nursery (the "importer"), who will receive the manure from the exporter.

2) The purpose of this agreement is to set forth the mutual responsibilities and understanding of the parties with respect to the export of manure from the exporter to the importer.

3) The exporter is located at (county, twp, and address): Monroe County, Paradise Twp.
   6190 Paradise Valley Road, Cresco, PA 18326

4) The exporter will, as the supply of manure allows, provide the following amounts of manure during the seasons outlined below:

   Tons or gallons (circle one) of manure, per season:

   Spring ____48_____ Summer ____48_____ Fall ____48_____ Winter ___48_____

5) The importer's location and other relevant information as it relates to this manure export, is as follows:

   a) **Phone number**: 570-839-7499
   b) **County(s)**: Monroe
   c) **Address**: Rt. 940, Cresco, PA 18326
   d) **Owner of the property receiving manure**: Mike Flood
   e) **Proposed usage of the imported manure**: landscaping

---

6) The exporter will use a Manure Export Sheet to record all manure exported to the importer. These Manure Export Sheets are available from the county conservation district or the State Conservation Commission. Computer generated forms other than the manure export sheet may be used if they contain the same information as, and are reasonably similar in format to, the forms available from the State Conservation Commission or the conservation district.

7) Records relating to the export of manure shall be prepared by the exporter in accordance with the following requirements of the Nutrient and Odor Management Act regulations:
   a) A Manure Export Sheet shall be used to document all manure exports for their records
      - A copy of the Manure Export Sheet shall be provided to the importer
      - A copy of the Manure Export Sheet shall be retained on site by the exporter

   b) Records shall be maintained by the exporter for a minimum of 3 years

8) Where applicable, the importer shall properly store manure received from the exporter in accordance with the provisions of the Manure Management Manual and the Pa Technical Guide and shall not cause contamination of surface or ground water. This shall include manure stacked in application fields which may not be retained in fields for greater than 120 days unless covered or otherwise protected (15 days if the manure is stacked in fields under the management control of a CAFO).

9) This agreement shall remain in full effect unless terminated by either party upon thirty days prior written notice to the other party. If this agreement is terminated, the exporter shall notify the county conservation district office that approved their nutrient management plan, of the termination.

Exporter Signature, Name and Date

Mark D Ecker (signature)

Mark F Ecker (name)

12/29/12 (date)

Importer Signature, Name and Date

Michael Flood (signature)

Michael Flood (name)

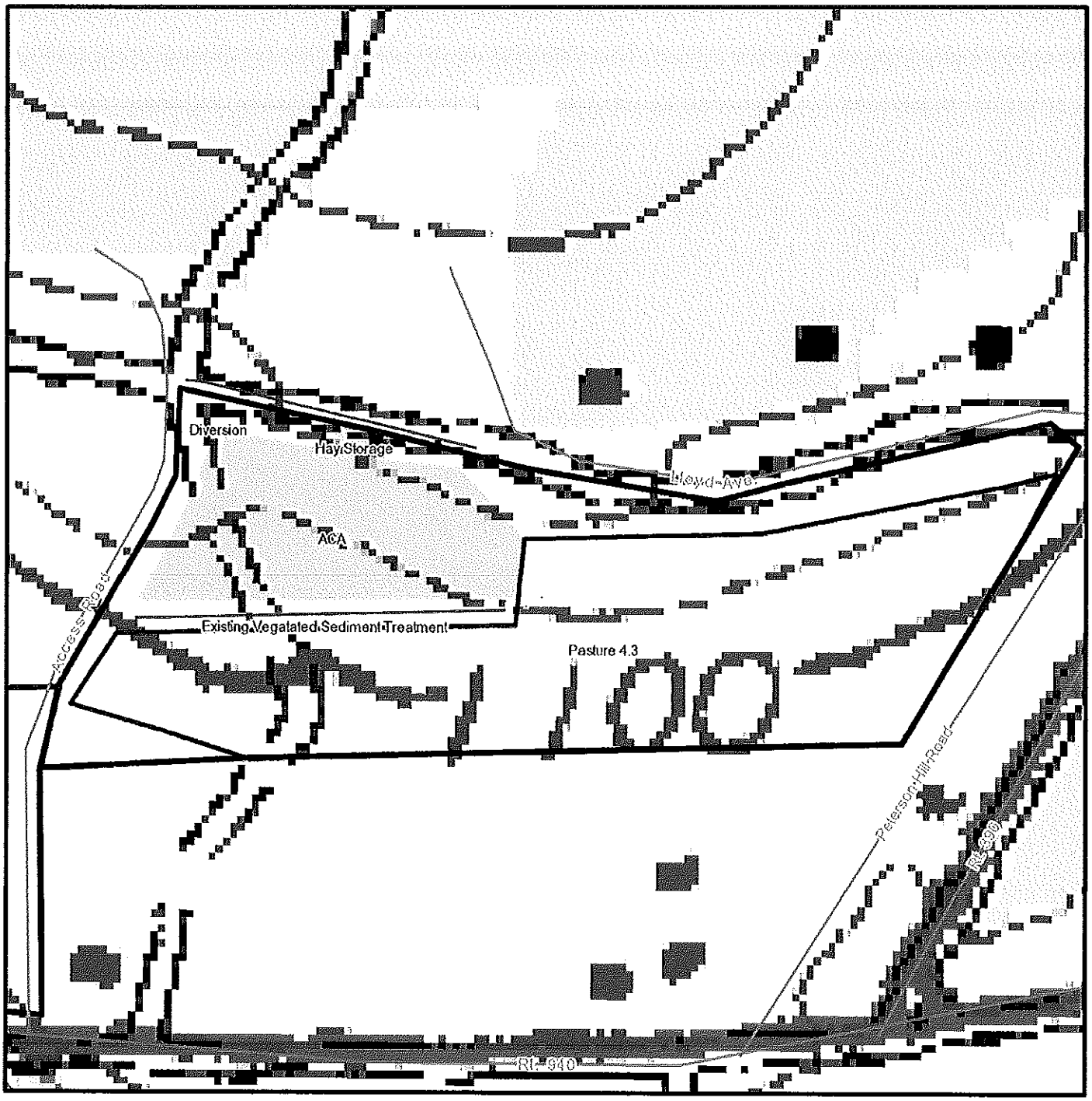
12/29/12 (date)

Appendix 9

Operation Maps

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Topographic Map and Soils Map** must be included here. The Topographic Map must be drawn to scale and identify the land included in the plan with operation boundaries. The Soils Map must include field identification and boundaries, soils types and slopes with soils legend. Adding P Index lines can be helpful on the Topographic or Soils Map, but are not required. The Operator Management Map must be included in the Nutrient Management Plan Summary.

Mt. Creek Riding Stable Topo 1 of 2



* 160.0 feet per inch

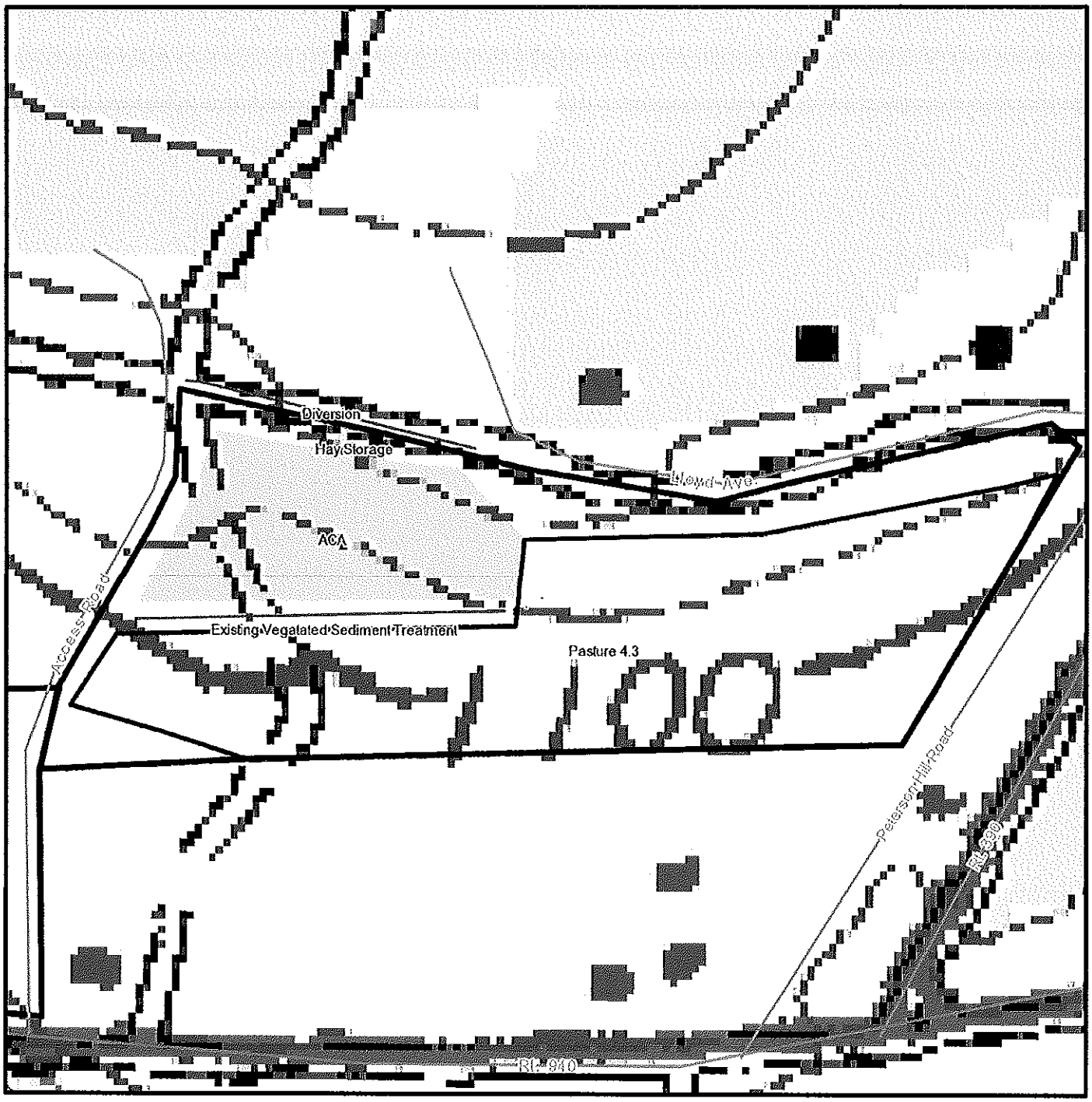
0 80 160 240 320 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

N

Mt. Creek Riding Stable Topo 2 of 2



* 160.0 feet per inch

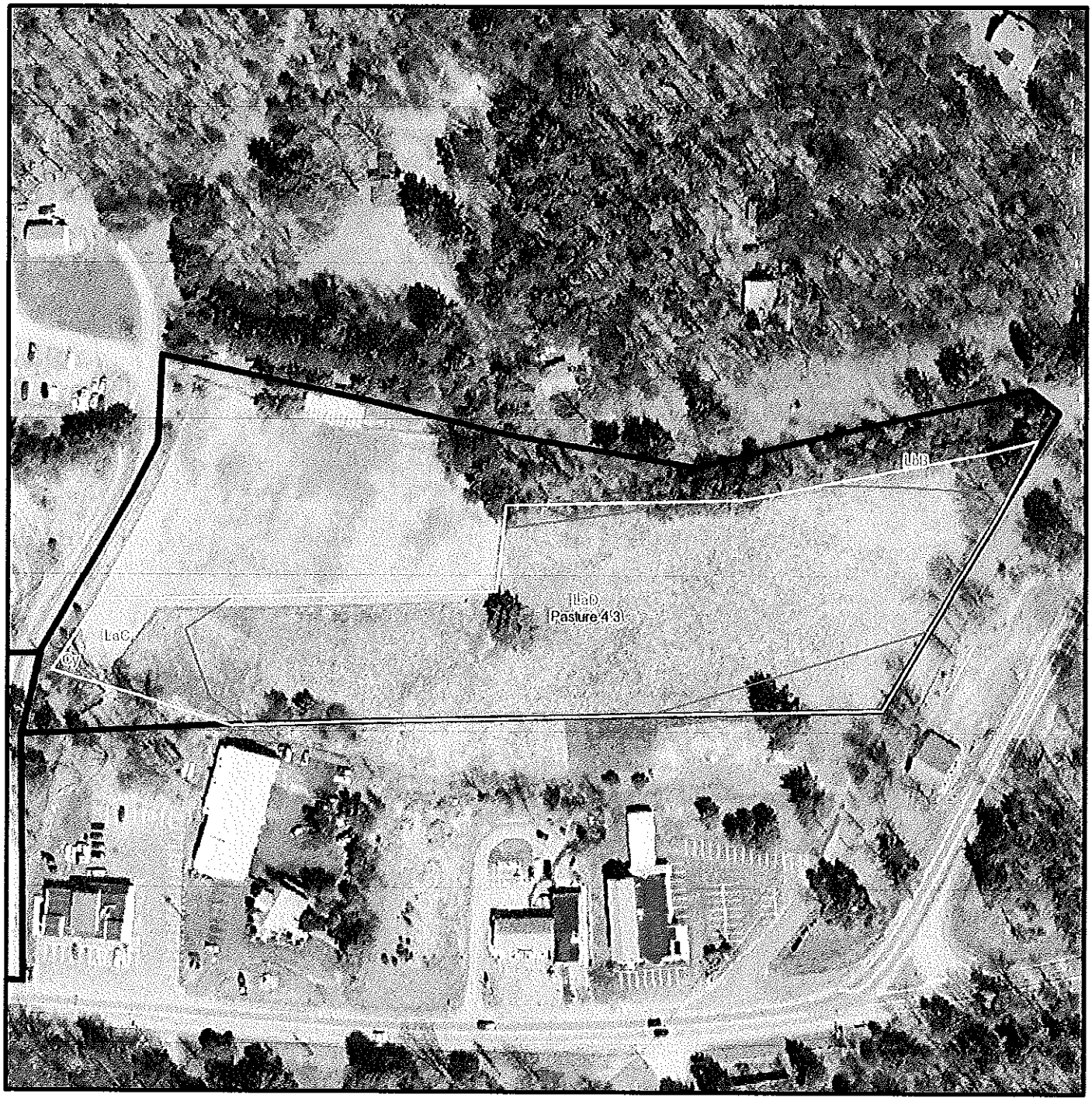
0 80 160 240 320 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

N

Mt. Creek Riding Stable Soils Map



* 160.0 feet per inch

0 80 160 240 320 feet

N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 09/24/15

Soil Acreages By Field

Field	Label	Musym	Muname	Acres	Drainage Class	Farmland Class	Kfact
Pasture	Pasture 4.3	LaC	Lackawanna channery loam, 8 to 15 percent slopes	0.67	Well drained	Farmland of statewide importance	0.32
Pasture	Pasture 4.3	LaD	Lackawanna channery loam, 15 to 25 percent slopes	3.45	Well drained	Not prime farmland	0.32
Pasture	Pasture 4.3	LbB	Lackawanna extremely stony loam, 0 to 8 percent slopes	0.13	Well drained	Not prime farmland	0.32

Soil Acreages For Farm

MUSYM	MUNAME	Drainage Class	Farmland Class	kfact	acres
LaC	Lackawanna channery loam, 8 to 15 percent slopes	Well drained	Farmland of statewide importance	0.32	0.67
LaD	Lackawanna channery loam, 15 to 25 percent slopes	Well drained	Not prime farmland	0.32	3.45
LbB	Lackawanna extremely stony loam, 0 to 8 percent slopes	Well drained	Not prime farmland	0.32	0.13

Appendix 10

Supporting Information & Documentation

Includes if applicable the Rainfall Additions Worksheet, Winter Application Matrix, Residual N Calculation Worksheet and other supplemental worksheets included in the NMP Spreadsheet. Attach information and documentation necessary to support plan content not included elsewhere in the NMP Spreadsheet or appendices. Examples include, but are not limited to, documentation of animal weights if Agronomy Facts 54 is not used, bedding calculations, or calculations for irrigation rates.

About 420 bags of wood pellets are used annually. Each bag of pellets weighs 40 lbs for a total of 8 tons of bedding.

Agenda item B.2.d

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: January 5, 2016

TO: Karl G. Brown, Executive Secretary
State Conservation Commission

FROM: Michael J. Walker, NM Regional Coordinator
State Conservation Commission
and
Christie Bedene, Nutrient Management Technician
Susquehanna County Conservation District

SUBJECT: Nutrient Management Plan Review (1)
Lackawanna County, Pennsylvania

Action Requested

Action on a Nutrient Management Plan for the following operation in Lackawanna County:

1. Andrew Mizerak Farm, 431 Route 247, Greenfield Township, PA 18407 (crop year 2017)

Background

Christie Bedene, Susquehanna County Conservation District and I have completed the required review of the subject nutrient management plan listed above. Final corrections to the plan were received at the PDA Region 2 office on January 4, 2016. As of that date, the plan was considered to be in its final form. The operation, located in Lackawanna County, is considered to be a volunteer animal operation (VAO) under the PA Nutrient and Odor Management Act. The Commission is the proper authority to take action on this plan, because Lackawanna County Conservation District has not been delegated plan review and action responsibilities (Level II) under the PA Nutrient and Odor Management Act Program.

A brief description of the operation, concluding with the staff recommendation, is attached. Also attached is a copy of the complete nutrient management plan for the operation.

Thank you for considering this plan for Commission action.

Farm Descriptions

1. Andrew Mizerak Dairy Farm NMP, 431 Route 247, Greenfield Township, PA 18407 (crop year 2017), Lackawanna County – Andrew Mizerak is operating a dairy operation that consists of 155.7 total acres in Lackawanna County. The operation consists of 94.54 acres of hay and 51.59 acres of cropland and 8.41 of pasture and 3.16 acres of farmstead. The crop rotation is 3 years of corn grain then 5 years of alfalfa/grass hay. There are some fields which are continuous hay fields on the operation. Mizerak dairy farm averages 35 dairy milk cows, 15 heifers and 5 calves on this operation. All manure is handled as a solid and spread every other day or on an as needed basis since there is no manure storage on the operation. The milking cows and calves are totally confined on this operation in a tie stall barn. The heifers have access to a covered barnyard and pasture. Heifer have access to pasture from May through November (approximately 180 days per year) and have access to water and feed supplemented in both the pasture and covered barnyard. All collected manure is planned to be land applied to crop fields on the Mizerak operation throughout the year. The combined animal equivalent units on Andrew Mizerak animal operation are planned at 59.92. The animal equivalent units per acre for this operation equals to 0.39, classifying the operation as a volunteer animal operation under Act 38 of 2005.

Approximately 1089 tons of manure is generated at the Mizerak dairy operation. Approximately 36 tons of the manure is land applied to the pasture from the heifer and the remaining 1053 tons is land applied to the crop land on this operation.

BMPs listed to be implemented on the Andrew Mizerak dairy operation include: Streambank Fencing, Watering Facility, Pipeline, Vegetative Treatment Area, Pumping plant, Waste Transfer and Sprinkler System. These proposed BMPs are needed on Mizerak dairy operation to protect water quality.

Based on Christie Bedene and my review, the NMP developed for Andrew Mizerak dairy operation meets the requirements of the PA Nutrient and Odor Management Act and Regulations, and I therefore recommend Commission approval.

Nutrient Management Plan

For Crop Years(s)
2017

Prepared for

Andrew Mizerak
431 Route 247
Greenfield Township, PA 18407

570-877-7819

Prepared by

Eric H Johnson
2008-NMPD
1038 Montdale Road, Suite 109
Scott Township, PA 18447

570-382-3086

Date of Plan Submission

12/8/15

Date(s) of Plan Update Submissions
(updates to approved plan not requiring board action)

SCC

January 22 14

January 4, 2016

Table of Contents

Nutrient Management Plan Summary
- Nutrient Management Plan Summary Notes
- Additional Nutrient Management Plan Requirements
- Operator Management Map

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Appendix 2: Operation Information
Appendix 3: Manure Group Information
Appendix 4: Crop and Manure Management Information
Appendix 5: Phosphorus Index
Appendix 6: Manure Management
Appendix 7: Stormwater Control
Appendix 8: Importer/Broker Agreements & Nutrient Balance Sheets
Appendix 9: Operation Maps
- Topographic Map
- Soils Map

Appendix 10: Supporting Information and Documentation
- Rainfall Additions Worksheet

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 152.6

Crop Year(s) 2017

Whole Farm Note: When necessary to meet soil test recommendations, apply supplemental fertilizer (commercial) and/or lime at rates specified in plan and in provided soil test results/recommendations. Should manure be exhausted in any field and additional nutrients be required above planned amount, supplement as needed with commercial fertilizer.

CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate	Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[1]			Notes (Select "Yes")
							N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	
Field 1	5.93	Corn Grain	Dairy-Cow/Calf-Winter	Winter	For next summer use by corn or annuals-No cover crop	17 ton/A	60	0	60	68	0	0	0	-102	-40	Yes
Field 2	7.06	Corn Grain	Dairy-Cow/Calf-Winter	Winter	For next summer use by corn or annuals-No cover crop	17 ton/A	60	0	60	68	0	0	0	-102	-50	Yes
Field 3	4.67	Grass hay	Dairy-Cow/Calf-Winter	Winter	Spring use by grass or small grains	10 ton/A	0	0	0	134	0	25	0	-60	0	Yes
Field 4	3.04	Corn Grain	Dairy-Cow/Calf-Spring	Spring	Incorporated after 7 days or none	17 ton/A	60	0	60	68	0	0	0	-102	-60	Yes
Field 5	13.47	Grass hay	Dairy-Cow/Calf-Summer	Summer	Incorporated after 7 days or none	10 ton/A	0	0	0	149	0	185	0	-60	0	Yes
Field 6	5.32	Corn Grain	Dairy-Cow/Calf-Spring	Spring	Incorporated after 7 days or none	26 ton/A	60	0	60	54	0	0	0	-56	-152	No
Field 7a	4.08	Corn Grain	Dairy-Cow/Calf-Spring	Spring	Incorporated after 7 days or none	17 ton/A	60	0	60	68	0	0	15	-12	-100	Yes
Field 7b	13.06	Alfalfa	No Manure	No Manure	No Manure	0	0	0	0	0	80	140	0	0	0	Yes
Field 8a	7	First year Alfalfa	No Manure	No Manure	No Manure	0	0	0	0	0	30	140	0	0	0	Yes
Field 8b	3.78	Alfalfa	No Manure	No Manure	No Manure	0	0	0	0	0	30	140	0	0	0	Yes

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit;
Negative numbers = nutrient excess

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 152.6

Crop Year(s) 2017

Whole Farm Note: When necessary to meet soil test recommendations, apply supplemental fertilizer (commercial) and/or lime at rates specified in plan and in provided soil test results/recommendations. Should manure be exhausted in any field and additional nutrients be required above planned amount, supplement as needed with commercial fertilizer.

CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate	Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[1]			Notes (Select "Yes")
							N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	
Field 9	6.81	Grass hay	Dairy-Cow/Calf-Summer	Early Fall	Spring use by winter crops or grass hay > Incorporated after 7 days or none	17 ton/A	0	0	0	138	0	160	0	-102	0	Yes
Field 10	6.06	Grass hay	No Manure	No Manure	No Manure	0	0	0	0	200	60	210	0	0	0	Yes
Field 11	3.48	Soybeans	No Manure	No Manure	No Manure	0	0	0	0	0	80	90	0	0	0	Yes
Field 12	12.19	Grass hay	No Manure	No Manure	No Manure	0	0	0	0	200	0	140	0	0	0	Yes
Field 13	9.5	Corn Grain	Dairy-Cow/Calf-Fall	Late Fall	For next summer use by corn or annuals-No cover crop	26 ton/A	60	0	60	69	0	0	0	-76	-142	Yes
Field 14	3.26	Grass hay	Dairy-Heifer-Fall	Spring/Summer: 1.2-15	Incorporated after 7 days	10 ton/A	0	0	0	159	61	63	0	0	0	No
Field 15	5.83	Grass hay	Dairy-Heifer-Fall	Spring/Summer: 1.2-15	Incorporated after 7 days	10 ton/A	0	0	0	159	41	53	0	0	0	Yes
Field 16	3.99	Grass hay	Dairy-Heifer-Spring	Late Fall	Spring use by grass or small grains	10 ton/A	0	0	0	149	61	63	0	0	0	Yes
Field 17	8.89	Corn Grain	No Manure	No Manure	No Manure	0	60	0	60	130	0	20	0	0	0	Yes
Field 18	12.42	Alfalfa	No Manure	No Manure	No Manure	0	0	0	0	0	120	220	0	0	0	Yes
Field 19	4.3	Corn Grain	No Manure	No Manure	No Manure	0	60	0	60	130	110	50	0	0	0	Yes
Pasture 1	8.41	Pasture	Dairy-Heifer - uncollected	Summer	Incorporated after 7 days or none	4.29 ton/A	0	0	0	106	0	10	0	-13	0	Yes

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit;
Negative numbers = nutrient excess

Nutrient Management Plan Summary Notes

Crop Years. 2017

CMU/Field ID	Notes
Field 1	Maintain 100' setback from any surface water, well heads, drainage inlets, etc. as noted in maps and ensure 25% cover as per Winter Application Regulations. Spreading is permitted on snow/ice covered ground.
Field 2	Maintain 100' setback from any surface water, well heads, drainage inlets, etc. as noted in maps and ensure 25% cover as per Winter Application Regulations. Spreading is permitted on snow/ice covered ground. Emergency manure stacking area located within this field (if necessary). See map for more details.
Field 3	Maintain 100' setback from any surface water, well heads, drainage inlets, etc. as noted in maps and ensure 25% cover as per Winter Application Regulations. Spreading is permitted on snow/ice covered ground. Will use last of Dairy-Cow/Calf-Winter manure group while spreading this field.
Field 4	Maintain 50' setback from surface water with manure application. Maintain 100' setback from wells as noted in map.
Field 5	Maintain 50' setback from surface water with manure application. Maintain 100' setback from wells as noted in map.
Field 7a	Will use last of Dairy-Cow/Calf-Spring manure group while spreading this field.
Field 7b	No manure applied.
Field 8a	No manure applied.
Field 8b	No manure applied.
Field 9	Will use last of Dairy-Cow/Calf-Summer manure group while spreading this field.
Field 10	No manure applied.
Field 11	No manure applied.
Field 12	No manure applied.
Field 13	Maintain 100' setback from wells as noted in map.
Field 15	Will use last of Dairy-Heifer-Spring Manure group while spreading this field.
Field 16	Will use last of Dairy-Heifer-Fall manure group while spreading this field. Supplement with 2 loads of Dairy-Cow/Calf-Summer manure (~18 tons)
Field 17	No manure applied.
Field 18	No manure applied.
Field 19	No manure applied.
Pasture 1	From May-November (6 months), 15 dairy heifers will have unrestricted access to pasture. Supplemental feed and water will be available in the barn (12 hours/day on pasture). Water is available on pasture as well as supplemental feed in turnout area on an as needed basis. No mechanical application of manure. Temporary stacking area for covered barnyard cleanout (if necessary) is located in this field. See map for more details.

CMU/Field ID	Notes

Additional Nutrient Management Plan Requirements

Manure Management and Stormwater BMP Implementation Summary

[1] - If applicable, enter USDA-NRCS Practice Code. For additional BMPs, enter the BMP description in the first blank cell.

Best Management Practice	NRCS Practice Code[1]	BMP Location	Implementation Season & Year
Streambank Fencing	382	Pasture 1	Planned for Summer/Fall 2016
Watering Facility	614	Pasture 1	Planned for Summer/Fall 2016
Pipeline	516	Pasture 1	Planned for Summer/Fall 2016
Waste Transfer System	634	Farmstead, Pasture 1, and Field 3	Planned for Summer/Fall 2017
Pumping Plant for Waste Water Control	533	Farmstead	Planned for Summer/Fall 2017
Sprinkler System	442	Field 3	Planned for Summer/Fall 2017
Vegetated Treatment Area	635	Field 3	Planned for Summer/Fall 2017

In-Field Manure Stacking Procedures

Manure must be applied to the field within 120 days of stacking or the stacks must be covered. Stacks must be implemented and maintained according to sound BMPs, addressing concerns such as soil type, soil slope, shape of the pile, setbacks, and rotation of piles.

Should stacking be required on the operation, it will be done in the areas shown on operation map, located in field 2 and pasture 1. The field 2 location is for emergency stacking, while the pasture 1 location is for temporary stacking for covered barnyard cleanout.

Additional CAFO Requirements

In-field stacking criteria, winter storage requirements, and other issues identified by DEP's review of the nutrient management plan.

N/A

Proposed Manure Storage Description

Type, dimensions, volume, freeboard and location on map.

N/A

Description of Planned Alternative Manure Technology Practices

Type of practice, volume of manure addressed, and result of practice.

N/A

Exported Manure Summary

Summarize in a short paragraph the arrangements proposed for the manure to be exported from the operation. This information is described in more detail in Appendix 8 of this plan.

N/A

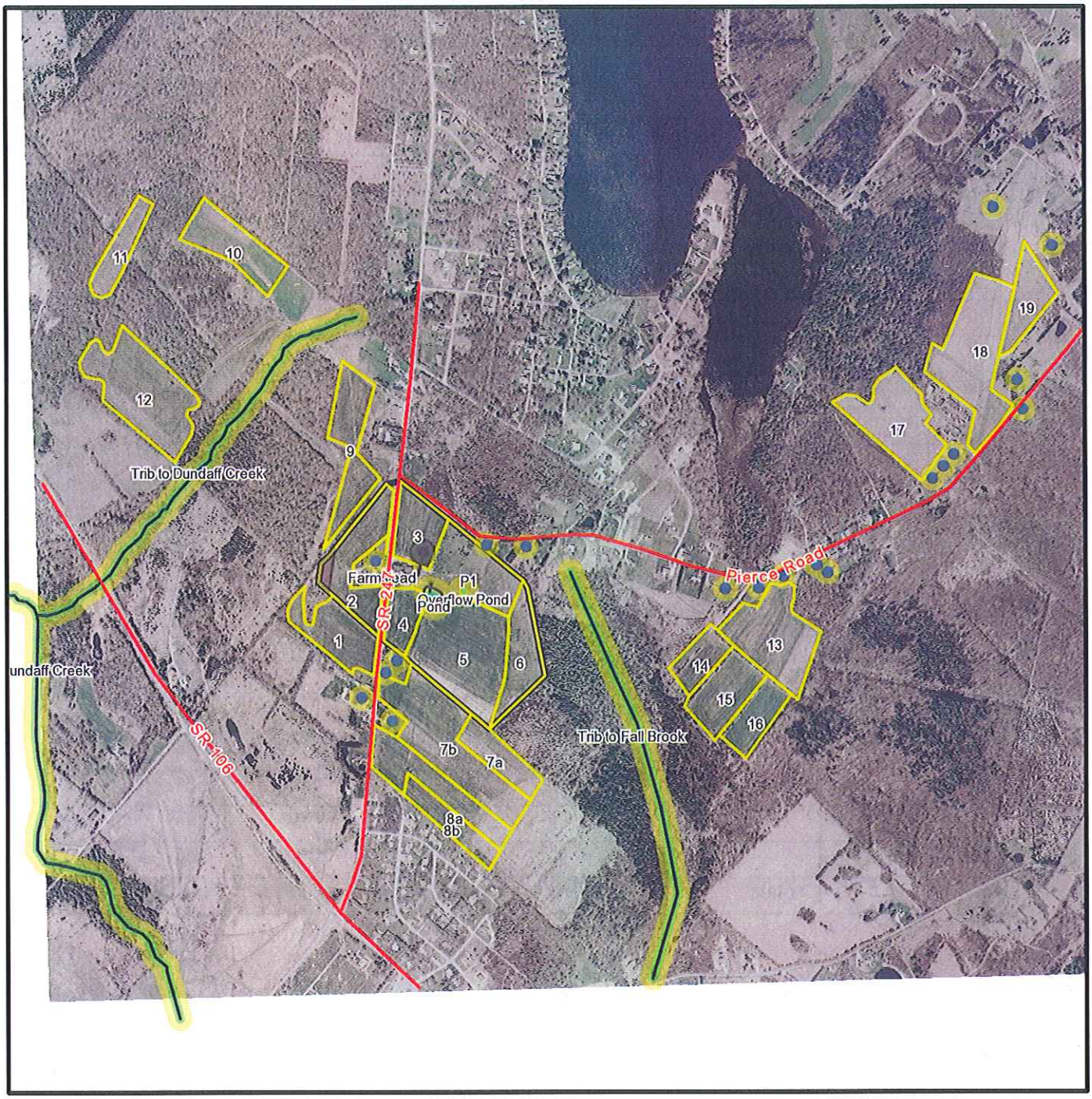
Operator Management Map

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Operator Management Map** is to be included here in the Nutrient Management Plan Summary and must include field identification, acreage and boundaries, manure application setback areas and buffers and associated landscape features (streams and other water bodies, sinkholes and active water wells), location of existing and proposed structural BMPs (including manure storage facilities), location of existing or proposed emergency manure stacking areas and in-field manure stacking areas, and road names adjacent to and within the operation. All features on the map must be clearly identified and include a legend for setback areas and other features. The Topographic Map and Soils Map must be included in Appendix 9.

Manure Spreader Calibration Notes

Manure Application Rate	Manure Spreader Used	Spreader Settings	Tractor Used (if applicable)	Tractor Settings (speed, gear, rpm, pto, etc.)
10 ton/acre	Kuhn/Knight 8014	3 inch open	JD 2950	6th gear, low range, 1800-2000 RPM
17 ton/acre	Kuhn/Knight 8014	5 inch open	JD 2950	6th gear, low range, 1800-2000 RPM
26 ton/acre .	Kuhn/Knight 8014	8 inch open	JD 2950	6th gear, low range, 1800-2000 RPM

Andrew Mizerak-Operation Map



* 1184.0 feet per inch

0 592 1184 1776 2368 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

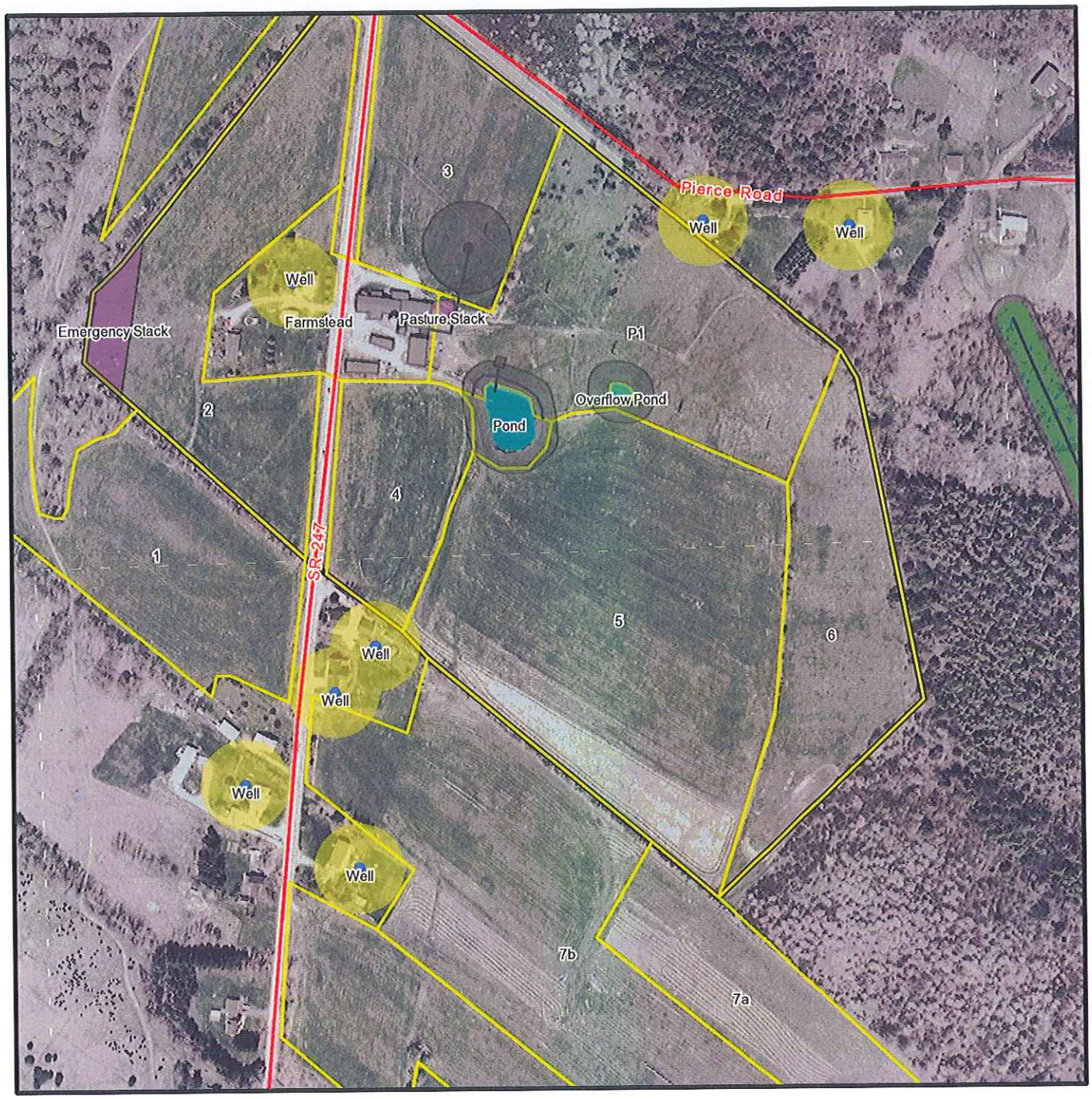
N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 01/04/16

Field Acreages

Field	Label	Description	Acres	Suitable Acres
1	1		5.93	5.93
10	10		6.06	6.06
11	11		3.48	3.48
12	12		12.19	12.19
13	13		9.5	9.34
14	14		3.26	3.26
15	15		5.83	5.83
16	16		3.99	3.99
17	17		8.89	8.72
18	18		12.42	12.41
19	19		4.3	4.3
2	2		7.06	7.06
3	3		4.67	4.67
4	4		3.03	2.73
5	5		13.47	12.74
6	6		5.32	5.32
7a	7a		4.08	4.08
7b	7b		13.06	12.83
8a	8a		7	7
8b	8b		3.78	3.78
9	9		6.81	6.81
Farmstead	Farmstead		3.16	2.44
P1	P1		8.28	6.55
		Totals	**155.57**	**151.52**

Mizerak-Zoomed View (Setbacks & Stacking Areas)



* 320.0 feet per inch

0 160 320 480 640 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 12/22/15

Field Acreages

Field	Label	Description	Acres	Suitable Acres
1	1		5.93	5.93
10	10		6.06	6.06
11	11		3.48	3.48
12	12		12.19	12.19
13	13		9.5	9.34
14	14		3.26	3.26
15	15		5.83	5.83
16	16		3.99	3.99
17	17		8.89	8.72
18	18		12.42	12.41
19	19		4.3	4.3
2	2		7.06	7.06
3	3		4.67	4.67
4	4		3.03	2.94
5	5		13.47	13.33
6	6		5.32	5.32
7a	7a		4.08	4.08
7b	7b		13.06	12.83
8a	8a		7	7
8b	8b		3.78	3.78
9	9		6.81	6.81
Farmstead	Farmstead		3.16	2.44
P1	P1		8.28	7.46
		Totals	**155.57**	**153.23**

Mizerak-Zoomed View (Setbacks)

* 320.0 feet per inch

0 160 320 480 640 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

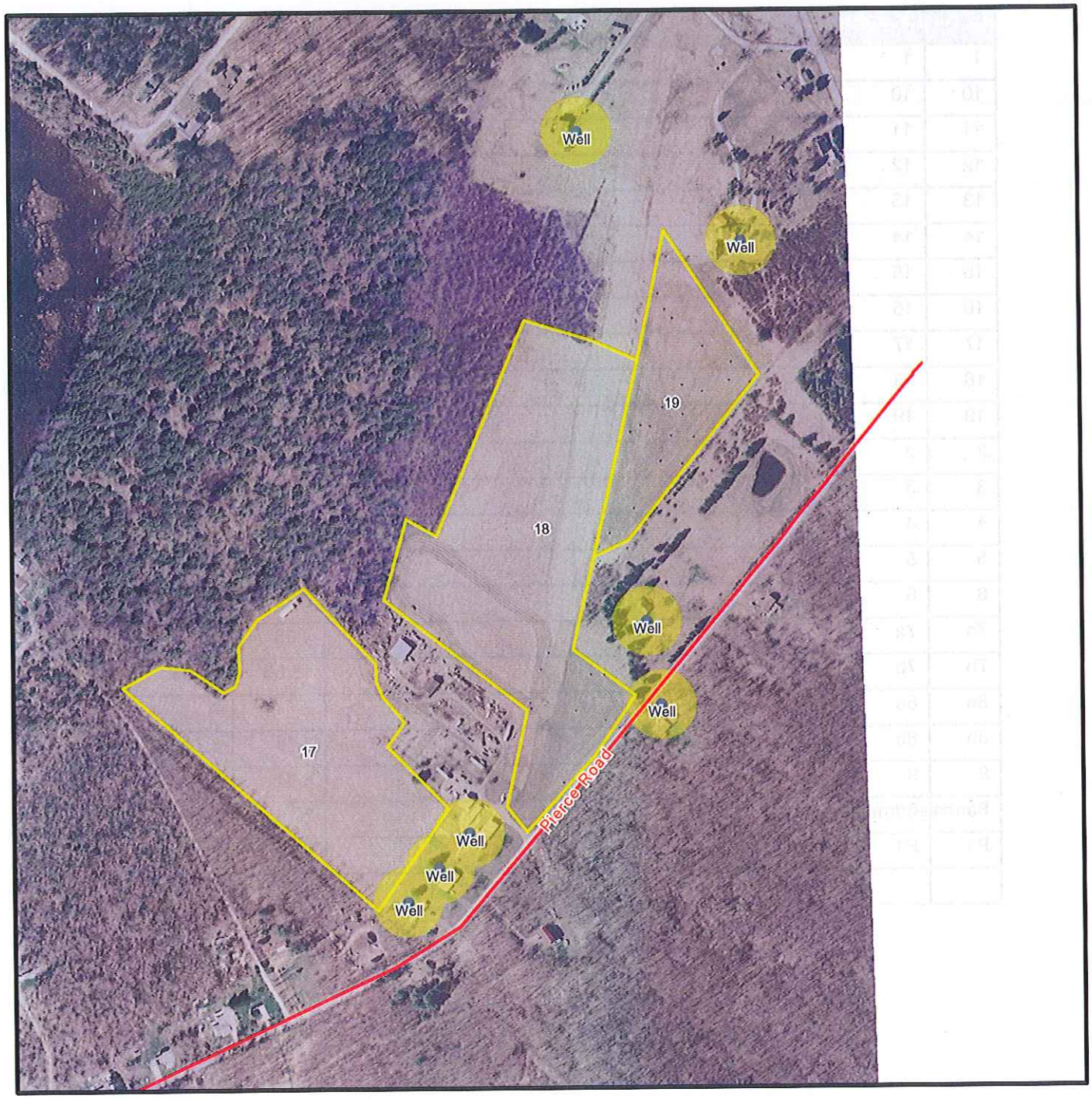
N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 12/22/15

Field Acreages

Field	Label	Description	Acres	Suitable Acres
1	1		5.93	5.93
10	10		6.06	6.06
11	11		3.48	3.48
12	12		12.19	12.19
13	13		9.5	9.34
14	14		3.26	3.26
15	15		5.83	5.83
16	16		3.99	3.99
17	17		8.89	8.72
18	18		12.42	12.41
19	19		4.3	4.3
2	2		7.06	7.06
3	3		4.67	4.67
4	4		3.03	2.94
5	5		13.47	13.33
6	6		5.32	5.32
7a	7a		4.08	4.08
7b	7b		13.06	12.83
8a	8a		7	7
8b	8b		3.78	3.78
9	9		6.81	6.81
Farmstead	Farmstead		3.16	2.44
P1	P1		8.28	7.46
		Totals	**155.57**	**153.23**

Mizerak-Zoomed View (Setbacks)



* 414.0 feet per inch

0 207 414 621 828 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

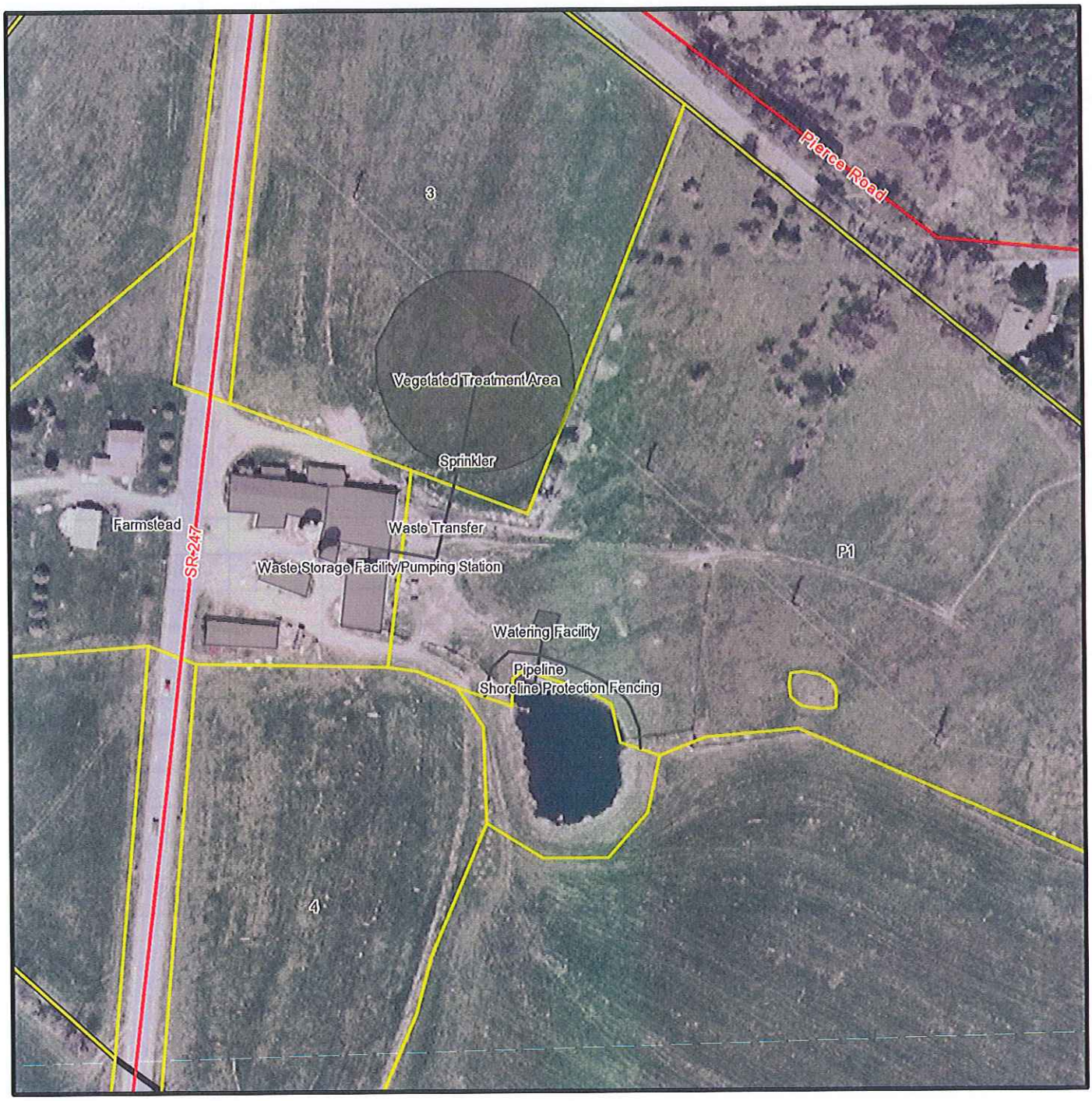
N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 12/22/15

Field Acreages

Field	Label	Description	Acres	Suitable Acres
1	1		5.93	5.93
10	10		6.06	6.06
11	11		3.48	3.48
12	12		12.19	12.19
13	13		9.5	9.34
14	14		3.26	3.26
15	15		5.83	5.83
16	16		3.99	3.99
17	17		8.89	8.72
18	18		12.42	12.41
19	19		4.3	4.3
2	2		7.06	7.06
3	3		4.67	4.67
4	4		3.03	2.94
5	5		13.47	13.33
6	6		5.32	5.32
7a	7a		4.08	4.08
7b	7b		13.06	12.83
8a	8a		7	7
8b	8b		3.78	3.78
9	9		6.81	6.81
Farmstead	Farmstead		3.16	2.44
P1	P1		8.28	7.46
		Totals	**155.57**	**153.23**

Mizerak-Zoomed View (Proposed BMP's)



* 146.0 feet per inch

0 73 146 219 292 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 12/22/15

Field Acreages

Field	Label	Description	Acres	Suitable Acres
1	1		5.93	5.93
10	10		6.06	6.06
11	11		3.48	3.48
12	12		12.19	12.19
13	13		9.5	9.34
14	14		3.26	3.26
15	15		5.83	5.83
16	16		3.99	3.99
17	17		8.89	8.72
18	18		12.42	12.41
19	19		4.3	4.3
2	2		7.06	7.06
3	3		4.67	4.67
4	4		3.03	2.94
5	5		13.47	13.33
6	6		5.32	5.32
7a	7a		4.08	4.08
7b	7b		13.06	12.83
8a	8a		7	7
8b	8b		3.78	3.78
9	9		6.81	6.81
Farmstead	Farmstead		3.16	2.44
P1	P1		8.28	7.46
		Totals	**155.57**	**153.23**

App. 4: Crop Yrs. 2017 CMU/Field ID	Field 19			Pasture 1		
Acres	4.3			8.4		
Soil Test Report Date	August 25, 2015			August 25, 2015		
Laboratory Name	PSU-AASL			PSU-AASL		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P 14	ppm K 57	pH 5.5	ppm P 93	ppm K 163	pH 5.8
P Index Part A	No to all Part A ques.			<150 ft from water		
	N-based			Part B		
Crop	Corn Grain			Pasture		
Planned Yield	190 bu/A			3 ton/A		
Soil Test Recommendation (lb/Acre)	N 190	P2O5 110	K2O 110	N 150	P2O5 0	K2O 40
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	60	0	60	0	0	0
P Index Application Method						
Manure History Description	Rarely - Summer Crop			Continuously - Summer Crop		
Residual Manure N (lb/A)	0			35		
Legume History Description Residual Legume N (lb/A)	Select a Previous Legume N Scenario			Select a Previous Legume N Scenario		
Net Nutrients Required (lb/A)	130	110	50	115	0	40
Manure Group	Select a Manure Group			Dairy-Heifer - uncollected		
Application Season Application Management (Incorporation, cover crops, etc.)	Select Manure Application Timing		Select Manure Application Method	Summer		Incorporated after 7 days or none
Availability Factors (Total N or NH4-N & Organic N)	Total N	NH4-N	Org. N	Total N 0.20	NH4-N	Org. N
P Index Application Method				April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)				57.5 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)				15 tons/A		
				Crop P Removal (lb/A)		45.0
P Index Value				25		
Planned Manure Rate (ton or gal/A)				4.29		ton/A
Nutrient Balance after Manure	130	110	50	106	-13	10
Supplemental Fertilizer (lb/A)	130	110	50	106		10
P Index Application Method						
Final Nutrient Balance (lb/A)	0	0	0	0	-13	0
Manure Utilized on CMU	0			36 tons		

Appendix 5

Phosphorus Index

The current Pennsylvania Phosphorus Index Spreadsheet for each field from Appendix 4 that required Part B of the P Index must be included here.

	A	B	C	D	E	F	G
1	**Appendix 5 - P Index**						
2	Crop Yrs. 2017						
3	Pennsylvania P Index Version 2		**PART A: SCREENING TOOL**			**CMU/Field ID**	**Field 1**
4	Go to Appendix 4		Is the CMU in a Special Protection watershed?			If the answer is Yes to any of these questions, Part B must be used.	**No**
5	Go to NMP Index		Is there a significant farm management change as defined by Act 38? (see below)				**No**
6	Go to Appendix 6		Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)				84
7			Is the Contributing Distance from this CMU to receiving water less than 150 ft.?				**No**
8			The following Act 38 criteria determine when there is a significant farm management change:				
9			1. net increase of greater than 10% in AEUs per acre				
10			2. a change in crop management that results in a farmwide reduction of greater than 20% in nitrogen necessary for realistic expe				
11			3. alternative organic sources will replace all or some of the nutrient sources listed in the plan				
12			4. additional lands are brought into the operation (purchased or rented)				
13	**PART B: SOURCE FACTORS**					**CMU/Field ID**	**Field 1**
14	SOIL TEST	Mehlich 3 Soil Test P (ppm P)					84
15						**Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)**	17
16	FERTILIZER P RATE					Fertilizer P (lb P2O5/acre)	0
17	FERTILIZER APPLICATION METHOD	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	0.2,None
18						**Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method**	0
19	MANURE P RATE					Manure P (lb P2O5/acre)	102
20	MANURE APPLICATION METHOD	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	1
21	P SOURCE COEFFICIENT	Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1					0.62
22						**Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient**	63
23						**Source Factor Sum**	80
24	**PART B: TRANSPORT FACTORS**					**CMU/Field ID**	**Field 1**
25	EROSION	Soil Loss (ton/acre/yr)					0.42
26	RUNOFF POTENTIAL	0 *Drainage Class is* Excessively	2 *Drainage Class is* Somewhat Excessively	4 *Drainage Class is* Well/Moderately Well	6 *Drainage Class is* Somewhat Poorly	8 *Drainage Class is* Poorly/Very Poorly	6
27	SUBSURFACE DRAINAGE	0 None		1 Random		2 * Patterned	0
28	CONTRIBUTING DISTANCE	0 > 500 ft.	2 350 to 500 ft.	4 200 to 349 ft.	6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer	9 ‡ < 100 ft.	0
29						**Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance**	6
30	MODIFIED CONNECTIVITY	0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT		1.0 Grassed Waterway or None		1.1 Direct Connection APPLIES TO DIST > 100 FT	1.0
31	* OR rapidly permeable soil near a stream					**Transport Sum x Modified Connectivity / 24**	0.27
32	‡ "9" factor does not apply to fields receiving manure with a 35 ft. buffer.					**P Index Value = 2 x Source x Transport**	**43**

	A	H	I	J	K	L
1	**Appendix 5 - P Index**					
2	Crop Yrs. 2017					
3	Pennsylvania P Index Version 2	Field 2	Field 3	Field 4	Field 5	Pasture 1
4	Go to Appendix 4	No	No	No	No	No
5	Go to NMP Index	No	No	No	No	No
6	Go to Appendix 6	112	113	130	47	93
7		No	No	Yes	Yes	Yes
8						
9						
10		cted crop yields				
11						
12						
13	**PART B: SOURCE FACTORS**	Field 2	Field 3	Field 4	Field 5	Pasture 1
14	SOIL TEST	112	113	130	47	93
15		22	23	26	9	19
16	FERTILIZER P RATE	0	0	0	0	0
17	FERTILIZER APPLICATION METHOD	0.2,None	None,None	0.2,None	None,None	None,None
18		0	0	0	0	0
19	MANURE P RATE	102	60	102	60	13
20	MANURE APPLICATION METHOD	1	1	0.6	0.6	0.6
21	P SOURCE COEFFICIENT	0.62	0.62	0.62	0.62	0.8
22		63	37	38	22	6
23		86	60	64	32	25
24	**PART B: TRANSPORT FACTORS**	Field 2	Field 3	Field 4	Field 5	Pasture 1
25	EROSION	0.47	0.65	0.62	0.57	0.24
26	RUNOFF POTENTIAL	6	6	6	6	6
27	SUBSURFACE DRAINAGE	0	0	0	0	0
28	CONTRIBUTING DISTANCE	0	6	6	6	6
29		6	13	13	13	12
30	MODIFIED CONNECTIVITY	1.0	1.0	1.0	1.0	1.0
31	* OR rapidly permeable soil near a strea	0.27	0.53	0.53	0.52	0.51
32	‡ "9" factor does not apply to fields recei	46	63	67	33	25

Appendix 6

Manure Management

Date of Site Evaluation

August 6, 2015

Statement Documenting Areas Evaluated During Site Evaluation

Sites evaulluated during manure management visit were manure loading area, covered barnyard, turnout area outside of covered barnyard, watering areas in pasture

Identification of Inadequate Manure Management Practices and Conditions

Turnout area is being managed as an unimproved surface HUAP with supplemental feeding. Manure buildup in some areas was considerable and manure pile from covered barnyard cleanout was present. Mr. Mizerak planned on spreading pile when conditions allowed. Watering areas in ponds were heavily denuded. Milkhouse waste was untreated and outlets at top of pasture 1 for overland flow.

BMPs to Address Manure Management Problem Areas

It is encouraged that any manure removed from covered barnyard be spread in a timely fashion so it does not have potential to runoff. Should spreading not be feasible, stacking should occur in area indicated on map. Should stack not be spread within 120 days, it will need to be covered. Also, uncovered turnout area should be managed as a HUAP in that excess manure be collected when feasible and downslope areas be managed to maximize cover to reduce/prevent nutrient runoff. Significant brown areas should be replanted to ensure adequate cover. Lastly, some type of watering system should be installed (pond access, portable tank, etc.) with on an improved surface and in conjunction with streambank/shoreline protection fencing as to prevent soil and nutrient deposition into pond. Lastly, a system for the storage, treatment, transport and spreading of milkhouse waste should be installed to properly address resource concern.

Appendix 7

Stormwater Control

Date of Site Evaluation August 6, 2015

Statement Documenting Areas Evaluated During Site Evaluation

Observed all crop field areas for significant erosion caused by stormwater runoff during site visit and/or during soil sampling efforts.

Identification of Critical Runoff Problem Areas

No significant CRPA's were identified on the operation.

BMPs to Address Critical Runoff Problem Areas

N/A

Appendix 8

Importer/Broker Agreements & NBSs

Nutrient Balance Sheets are not required for importers that have an approved Nutrient Management Plan.

N/A	N/A	N/A

Appendix 9

Operation Maps

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Topographic Map and Soils Map** must be included here. The Topographic Map must be drawn to scale and identify the land included in the plan with operation boundaries. The Soils Map must include field identification and boundaries, soils types and slopes with soils legend. Adding P Index lines can be helpful on the Topographic or Soils Map, but are not required. The Operator Management Map must be included in the Nutrient Management Plan Summary.

Appendix 1

Nutrient Management Plan Agreement & Responsibilities

Plan Implementation Requirements

This nutrient management plan has been developed to meet the requirements of the following programs:

- ☑ Pennsylvania Act 38 of 2005, Select one → ☐ CAO ☑ VAO
- ☐ Pennsylvania CAFO (Concentrated Animal Feeding Operation) program
- ☐ NRCS (Natural Resources Conservation Service) 590 Nutrient Management Standard
- ☐ NRCS CNMP (Comprehensive Nutrient Management Plan)
- ☐ Other program: _____

Plans developed under these programs are required to be implemented as approved in order to maintain compliance with the specific law or program. Implementation includes adherence to manure and fertilizer application rates, timing, setbacks and conditions; installation of listed BMPs within implementation timeframes; and recordkeeping obligations of the program.

The nutrient management plan has been developed as a: (check one)

- ☑ 1 - Year Plan for crop year 2017 (annual updates will be completed)
- ☐ 3 - Year Plan for crops years _____

Records required to be maintained include the following:

1) Annual crop yields
2) Manure and fertilizer application rates, locations and date of application
3) Manure production figures for the various manure groups listed in your plan
4) Soil test reports (testing required every 3 years per crop management unit)
5) Manure test reports (testing required once a year for each manure group)
6) Number of animals on pasture, number of days on pasture, and hours per day on pasture
7) For operations exporting manure, Manure Export Sheets
8) BMP designs and certification for new liquid and semi-solid manure storage facilities

The following has been confirmed:

- ☑ Verification of Existing Site Specific Emergency Response Plan
- ☑ Verification that owners of rented/leased lands have been notified that a nutrient management plan has been developed which calls for manure to be applied to their lands and that they have no objections to the plan requirements.
- ☐ No rented/leased lands

Specialist Signature

I affirm that the information contained in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, based on information provided by the operator. This plan has been developed in accordance with the criteria established for the program(s) indicated above. I affirm that I have discussed the content and implementation of this plan with the operator.

Specialist Signature _____

Date 12/4/15

Operator Agreement

I affirm that all information provided in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, and reflects the current and planned activities of the operation. I understand and affirm that I will implement the practices, procedures and record keeping obligations as outlined in this plan in order to protect water quality and address the nutrient needs of the crops associated with the operation. I affirm that if I use a commercial hauler or broker for the application or export of manure, that only haulers or brokers that hold a valid certification issued by the Pa Department of Agriculture, under Act 49 of 2004, will be used.

Operator's Signature _____

Date 12/4/15

Operator's Title Owner

Appendix 2

Operation Information

Operation Description

Animal types and numbers; cropland, hayland and pastureland acreage; farmstead acreage; crop rotation (crops, sequence of crops, and number of years for each crop); manure group management, including atypical manure (contributing animal groups, collection, storage and handling procedures); mortality composting management.

The Mizerak Dairy Farm consists of 155.7 total acres. This acreage consistes of a 3.16 acre farmstead, 51.59 cropland acres, 92.54 hayland acres and 8.41 pasture acres. A normal crop rotation for the farm is 3 years corn grain, 5 years alfalfa/grass hay. However, fields 10, 12, 14, 15, 16 and 18 are being maintaged as continuous hay. Also, field 11 has been planted to soybeans last 2 years to test effectiveness of crop and will continue to be soybeans in 2017 (and potentially beyond). Farm utilizes stripcropping to control erosion on corn/soybean ground and plants all corn, soybean and hay crops using no-till or conservation tillage. Manure is handled as 2 groups. The first group consists of 35 milking dairy cows and 5 calves that are housed in the tie stall barn. It is spread every other day or on an as needed basis with no manure storage present on the operation. The second group consists of 15 heifers that utlize a covered barnyard and pasture area. From May-November (6 months), animals have access to pasture with water and feed both in barn and on pasture. From November May (6 months), animals are restricted to covered barnyard area. No mortality composting occurs on the operation as mortality is handled by a rendering service. Milkhouse waste water gravity flows from barn to outlet in farmstead at the top of pasture 1.

County(s)

Lackawanna

Name of Receiving Stream(s)/Watershed(s)

Fall Brook and Dundaff Creek

Notation of Special Protection Waters

None

Operation Acres

Total Acres: 155.7

Total Acres Available For Nutrient Application Under Operator's Control

Owned: 41.96

Rented: 110.58

Names & Addresses of Owners of Rented or Leased Land

Trevor Walczak-359 Route 106 Greenfield TWP, PA 18407; Phil Podyski-197 Pierce Rd, Greenfield TWP, PA 18407; Tom Synder-150 Pierce Rd, Greenfield TWP, PA 18407; Bob Malinchak-193 Pierce Rd Greenfield TWP, PA 18407; Kevin Duggan-119 W Swordfish Way, Lavallette, NJ 08735

Animal Equivalent Units: 59.92

Animal Equivalent Units Per Acre: 0.39

Existing Manure Storages & Capacity

Type of storage, dimensions, useable capacity, freeboard, top or bottom loaded, dimensions and description of contributing runoff area, description of wastewater additions, types and amounts of bedding. Briefly describe, for each manure group, manure storage management during removal (degree of agitation, method of manure removal, extent the storage is emptied, type of unremoved manure, etc.) and manure sampling procedures. If additional space is needed, make a note and include the required information in Appendix 10.

N/A

Manure Application Equipment Capacity & Practical Application Rates

Description of application equipment, practical application rates based on calibration and calibration method used, the data recorded during equipment calibration is to be retained on the farm.

John Deere 2950 Tractor with Kuhn Knight 8014 Spreader (265 bu capacity). For calibration, we ran tractor in 6th gear, low range, between 1800-2000 RPM. We varied the door opening and used the covered area method to determine the application rate. Application rates for the operation are:
3 inch door opening-10 ton/acre, 5 inch opening-17 ton/acre, 8 inch opening, 26 ton/acre

Appendix 3
Manure Group Information

When entering manure group information for the first time, select "Calculated or Records" button.

Manure Group Identification	Dairy-Cow/Calf-Fall		Dairy-Cow/Calf-Winter		Dairy-Cow/Calf-Spring		Dairy-Cow/Calf-Summer		Dairy-Heifer-Spring	
Manure Report Date (note if averaging several reports)	August 11, 2015		August 11, 2015		August 11, 2015		August 11, 2015		August 10, 2015	
Laboratory Name	Agri Analysis INC		Agri Analysis INC		Agri Analysis INC		Agri Analysis INC		Agri Analysis INC	
Manure Type	Dairy		Dairy		Dairy		Dairy		Dairy	
Manure Unit (lbs/ton or 1000 gal)	lb/ton		lb/ton		lb/ton		lb/ton		lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	7.8		7.8		7.8		7.8		7.7	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	1.2		1.2		1.2		1.2		2.2	
Total Organic N (lbs/ton or 1000 gal)	6.6		6.6		6.6		6.6		5.5	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	6.0		6.0		6.0		6.0		3.9	
Total Potash (K_2O) (lbs/ton or 1000 gal)	3.5		3.5		3.5		3.5		15.7	
Percent Solids	14.60		14.60		14.60		14.60		15.40	
PSC Value (Enter analytical or book value)	0.62		0.62		0.62		0.62		0.24	
Inventory Method	Calculated		Calculated		Calculated		Calculated		Calculated	
	Collected Calc	Uncollected Calc	Collected Calc	Uncollected Calc	Collected Calc	Uncollected Calc	Collected Calc	Uncollected Calc	Collected Calc	Uncollected Calc
Manure Group Identification	Dairy-Cow/Calf-Fall		Dairy-Cow/Calf-Winter		Dairy-Cow/Calf-Spring		Dairy-Cow/Calf-Summer		Dairy-Heifer-Spring	Dairy-Heifer-Spring - uncollected
Description: Site & Season Applied	Fall		Winter		Spring		Summer		Fall	
CALCULATED: Total Manure Collected Per Manure Group	236		236		236		236		36	36
Unit	Tons		Tons		Tons		Tons		Tons	Tons
RECORDS: Total Manure Collected Per Manure Group										
Unit										
	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected
Manure Used On-Farm	247		268		259		251		40	36
Units	Tons		Tons		Tons		Tons		Tons	Tons
Manure Allocation Balance	-11		-32		-23		-15		-4	0
Units	Tons		Tons		Tons		Tons		Tons	Tons
Manure Exported	0		0		0		0		0	
Units	Tons		Tons		Tons		Tons		Tons	
Total Rainfall and Runoff	0		0		0		0		0	

	Manure Generation per Animal Group *	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group *	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group *	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group *	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group *	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 1	Dairy-Cow		Dairy-Cow		Dairy-Cow		Dairy-Cow		Dairy-Heifer	Dairy-Heifer - uncollected
Animal Type	Dairy:Lact. Cows, solid		Dairy:Lact. Cows, solid		Dairy:Lact. Cows, solid		Dairy:Lact. Cows, solid		Dairy:Heifer	Total Nitrogen (N) (lbs/ton or 1000 gal)
Animal Number	35		35		35		35		15	10.00
Animal Weight	1300		1300		1300		1300		900	Total Phosphate (P2O5) (lbs/ton or 1000 gal)
Animal Group AUs	45.5		45.5		45.5		45.5		13.5	3.00
Animal Group AEUs	11.22		11.22		11.22		11.22		6.66	Total Potash (K2O) (lbs/ton or 1000 gal)
Daily Manure Production per AU	111		111		111		111		60	7.00
Total Days Manure Produced	90		90		90		90		180	PSC Value
Total Manure Produced	227		227		227		227		73	0.80
Days On Pasture	0		0		0		0		180	
Hours Per Day On Pasture	0		0		0		0		12	
Total Bedding	2		2		2		2		0	
Total Washwater	0		0		0		0		0	
CALCULATED - Total Uncollected Manure									36	
CALCULATED-Total Manure Collected Per Animal Group	229		229		229		229		36	

Animal Group 2	Dairy-Calf		Dairy-Calf		Dairy-Calf		Dairy-Calf			
Animal Type	Dairy:Calf		Dairy:Calf		Dairy:Calf		Dairy:Calf			
Animal Number	5		5		5		5			
Animal Weight	350		350		350		350			
Animal Group AUs	1.8		1.8		1.8		1.8			
Animal Group AEUs	0.43		0.43		0.43		0.43			
Daily Manure Production per AU	80		80		80		80			
Total Days Manure Produced	90		90		90		90			
Total Manure Produced	6		6		6		6			
Days On Pasture	0		0		0		0			
Hours Per Day On Pasture	0		0		0		0			
Total Bedding	0		0		0		0			
Total Washwater	0		0		0		0			
CALCULATED - Total Uncollected Manure										
CALCULATED-Total Manure Collected Per Animal Group	7		7		7		7			

Appendix 3
Manure Group Information

Manure Group Identification	Dairy-Heifer-Fall	
Manure Report Date (note if averaging several reports)	August 10, 2015	
Laboratory Name	Agri Analysis INC	
Manure Type	Dairy	
Manure Unit (lbs/ton or 1000 gal)	lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	7.7	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	2.2	
Total Organic N (lbs/ton or 1000 gal)	5.5	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	3.9	
Total Potash (K_2O) (lbs/ton or 1000 gal)	15.7	
Percent Solids	15.40	
PSC Value (Enter analytical or book value)	0.24	
Inventory Method	Calculated	
	Collected Calc.	Uncollected Calc.
Manure Group Identification	Dairy-Heifer-Fall	
Description: Site & Season Applied	Spring	
CALCULATED: Total Manure Collected Per Manure Group	73	
Unit	Tons	
RECORDS: Total Manure Collected Per Manure Group		
Unit		
	Collected	Uncollected
Manure Used On-Farm	91	
Units	Tons	
Manure Allocation Balance	-18	
Units	Tons	
Manure Exported	0	
Units	Tons	
Total Rainfall and Runoff	0	

	Manure Generation per Animal Group	Uncollected Manure Nutrient Analysis Book Values
Animal Group 1	Dairy-Heifer	
Animal Type	Dairy:Heifer	
Animal Number	15	
Animal Weight	900	
Animal Group AUs	13.5	
Animal Group AEUs	6.66	
Daily Manure Production per AU	60	
Total Days Manure Produced	180	
Total Manure Produced	73	
Days On Pasture	0	
Hours Per Day On Pasture	0	
Total Bedding	0	
Total Washwater	0	
CALCULATED - Total Uncollected Manure		
CALCULATED-Total Manure Collected Per Animal Group	73	

Animal Group 2		
Animal Type		
Animal Number		
Animal Weight		
Animal Group AUs		
Animal Group AEUs		
Daily Manure Production per AU		
Total Days Manure Produced		
Total Manure Produced		
Days On Pasture		
Hours Per Day On Pasture		
Total Bedding		
Total Washwater		
CALCULATED - Total Uncollected Manure		
CALCULATED-Total Manure Collected Per Animal Group		

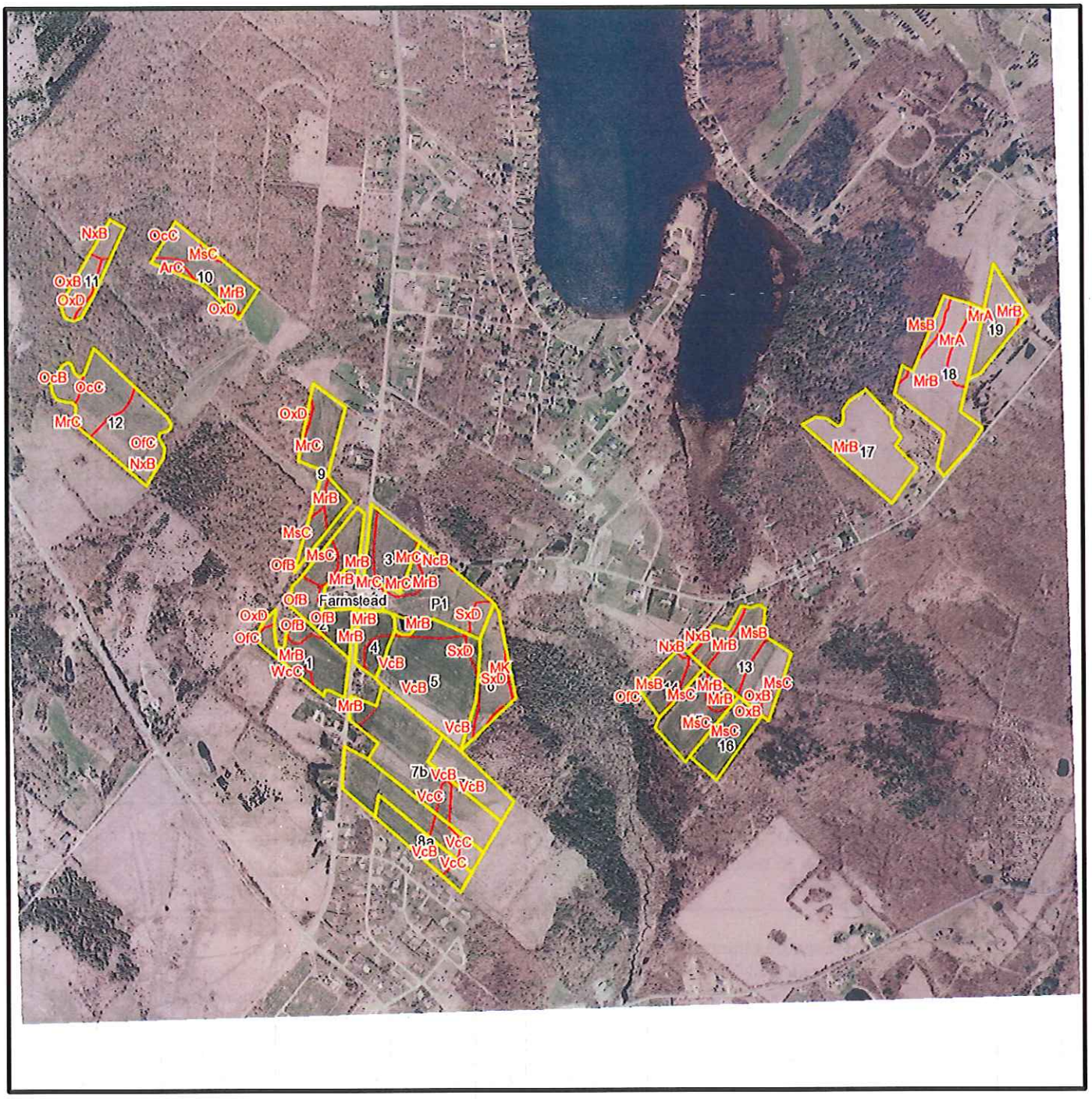
App. 4: Crop Yrs. 2017 CMU/Field ID	Field 1			Field 2			Field 3			Field 4			Field 5		
Acres	5.9			7.1			4.7			3.0			13.5		
Soil Test Report Date	August 25, 2015			August 25, 2015			August 25, 2015			August 25, 2015			August 25, 2015		
Laboratory Name	PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
	84	72	6.1	112	81	6.4	113	164	6.3	130	100	6.8	47	55	5.9
P Index Part A	Run P Index Part B			Run P Index Part B			Run P Index Part B			<150 ft from water			<150 ft from water		
	Part B			Part B			Part B			Part B			Part B		
Crop	Corn Grain			Corn Grain			Grass hay			Corn Grain			Grass hay		
Planned Yield	190 bu/A			190 bu/A			4 ton/A			190 bu/A			4 ton/A		
Soil Test Recommendation (lb/Acre)	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
	190	0	80	190	0	70	200	0	60	190	0	60	200	0	220
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	60	0	60	60	0	60	0	0	0	60	0	60	0	0	0
P Index Application Method															
Manure History Description	Continuously - Summer Crop			Continuously - Summer Crop			Continuously - Summer Crop			Continuously - Summer Crop			Continuously - Summer Crop		
Residual Manure N (lb/A)	35			35			35			35			35		
Legume History Description Residual Legume N (lb/A)	Select a Previous Legume N Scenario			Select a Previous Legume N Scenario			Select a Previous Legume N Scenario			Select a Previous Legume N Scenario			Select a Previous Legume N Scenario		
Net Nutrients Required (lb/A)	95	0	20	95	0	10	165	0	60	95	0	0	165	0	220
Manure Group	Dairy-Cow/Calf-Winter			Dairy-Cow/Calf-Winter			Dairy-Cow/Calf-Winter			Dairy-Cow/Calf-Spring			Dairy-Cow/Calf-Summer		
Application Season Application Management (Incorporation, cover crops, etc.)	Winter		For next summer use by corn or annuals-No cover crop	Winter		For next summer use by corn or annuals-No cover crop	Winter		Spring use by grass or small grains	Spring		Incorporated after 7 days or none	Summer		Incorporated after 7 days or none
Availability Factors (Total N or NH4-N & Organic N)	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N
	0.20			0.20			0.40			0.20			0.20		
P Index Application Method	Surface app. when frozen/snow covered			Surface app. when frozen/snow covered			Surface app. when frozen/snow covered			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	60.9 tons/A			60.9 tons/A			52.9 tons/A			60.9 tons/A			105.8 tons/A		
P Removal Balance Manure Rate (ton or gal/A; if required by P Index)	12.7 tons/A			12.7 tons/A			10 tons/A			12.7 tons/A			10 tons/A		
	Crop P Removal (lb/A)		76.0	Crop P Removal (lb/A)		76.0	Crop P Removal (lb/A)		60.0	Crop P Removal (lb/A)		76.0	Crop P Removal (lb/A)		60.0
P Index Value	43			46			63			67			33		
Planned Manure Rate (ton or gal/A)	17		ton/A	17		ton/A	10		ton/A	17		ton/A	10		ton/A
Nutrient Balance after Manure	68	-102	-40	68	-102	-50	134	-60	25	68	-102	-60	149	-60	185
Supplemental Fertilizer (lb/A)	68			68			134		25	68			149		185
P Index Application Method															
Final Nutrient Balance (lb/A)	0	-102	-40	0	-102	-50	0	-60	0	0	-102	-60	0	-50	0
Manure Utilized on CMU	101 tons			120 tons			47 tons			52 tons			135 tons		

App. 4: Crop Yrs. 2017 CMU/Field ID	Field 6			Field 7a			Field 7b			Field 8a			Field 8b		
Acres	5.3			4.1			13.1			7.0			3.8		
Soil Test Report Date	August 25, 2015			August 25, 2015			August 25, 2015			August 25, 2015			August 25, 2015		
Laboratory Name	PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
	19	144	5.7	21	122	5.7	21	122	5.7	36	121	5.6	36	121	5.6
P Index Part A	No to all Part A ques.			No to all Part A ques.			No to all Part A ques.			No to all Part A ques.			No to all Part A ques.		
	N-based			N-based			N-based			N-based			N-based		
Crop	Corn Grain			Corn Grain			Alfalfa			First year Alfalfa			Alfalfa		
Planned Yield	190 bu/A			190 bu/A			4 ton/A			4 ton/A			4 ton/A		
Soil Test Recommendation (lb/Acre)	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
	190	100	0	190	90	20	0	80	140	0	30	140	0	30	140
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	60	0	60	60	0	60	0	0	0	0	0	0	0	0	0
P Index Application Method															
Manure History Description	Continuously - Summer Crop			Frequently - Summer Crop			Frequently - Summer Crop			Frequently - Summer Crop			Frequently - Summer Crop		
Residual Manure N (lb/A)	35			20			20			20			20		
Legume History Description Residual Legume N (lb/A)	Select a Previous Legume N Scenario			Select a Previous Legume N Scenario			Select a Previous Legume N Scenario			Select a Previous Legume N Scenario			Select a Previous Legume N Scenario		
Net Nutrients Required (lb/A)	95	100	-60	110	90	-40	0	80	140	0	30	140	0	30	140
Manure Group	Dairy-Cow/Calf-Spring			Dairy-Cow/Calf-Spring						Select a Manure Group			Select a Manure Group		
Application Season Application Management (Incorporation, cover crops, etc.)	Spring		Incorporated after 7 days or none	Spring		Incorporated after 7 days or none				Select Manure Application Timing		Select Manure Application Method	Select Manure Application Timing		Select Manure Application Method
Availability Factors (Total N or NH4-N & Organic N)	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N
	0.20			0.20											
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	60.9 tons/A			70.5 tons/A											
P Removal Balance Manure Rate (ton or gal/A, If required by P Index)	12.7 tons/A			12.7 tons/A											
	Crop P Removal (lb/A)		76.0	Crop P Removal (lb/A)		76.0									
P Index Value															
Planned Manure Rate (ton or gal/A)	26		ton/A	17		ton/A									
Nutrient Balance after Manure	54	-56	-152	83	-12	-100	0	80	140	0	30	140	0	30	140
Supplemental Fertilizer (lb/A)	54			68			0	80	140	0	30	140	0	30	140
P Index Application Method															
Final Nutrient Balance (lb/A)	0	-56	-152	15	-12	-100	0	0	0	0	0	0	0	0	0
Manure Utilized on CMU	138 tons			69 tons			0			0			0		

App. 4: Crop Yrs. 2017 CMU/Field ID	Field 9			Field 10			Field 11			Field 12			Field 13		
Acres	6.8			6.1			3.5			12.2			9.5		
Soil Test Report Date	August 25, 2015			August 25, 2015			August 25, 2015			August 25, 2015			August 25, 2015		
Laboratory Name	PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	77	66	6.1	30	78	5.7	20	74	6.2	54	121	5.7	27	137	5.5
P Index Part A	No to all Part A ques.			No to all Part A ques.			No to all Part A ques.			No to all Part A ques.			No to all Part A ques.		
	N-based			N-based			N-based			N-based			N-based		
Crop	Grass hay			Grass hay			Soybeans			Grass hay			Corn Grain		
Planned Yield	4 ton/A			4 ton/A			50 bu/A			4 ton/A			190 bu/A		
Soil Test Recommendation (lb/Acre)	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
	200	0	220	200	60	210	0	80	90	200	0	140	190	80	10
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0	0	0	0	0	0	0	60	0	60
P Index Application Method															
Manure History Description	Continuously - Summer Crop			Rarely - Summer Crop			Rarely - Summer Crop			Rarely - Summer Crop			Frequently - Summer Crop		
Residual Manure N (lb/A)	35			0			0			0			20		
Legume History Description Residual Legume N (lb/A)	Select a Previous Legume N Scenario			Select a Previous Legume N Scenario			Soybeans, 50 bu/A	50		Select a Previous Legume N Scenario			Select a Previous Legume N Scenario		
Net Nutrients Required (lb/A)	165	0	220	200	60	210	0	80	90	200	0	140	110	80	-50
Manure Group	Dairy-Cow/Calf-Summer			Select a Manure Group			Select a Manure Group			Select a Manure Group			Dairy-Cow/Calf-Fall		
Application Season Application Management (Incorporation, cover crops, etc.)	Early Fall		Spring use by winter crops or grass hay > Incorporated after 7 days or none	Select Manure Application Timing		Select Manure Application Method	Select Manure Application Timing		Select Manure Application Method	Select Manure Application Timing		Select Manure Application Method	Late Fall		For next summer use by corn or annuals-No cover crop
Availability Factors (Total N or NH4-N & Organic N)	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N
	0.20												0.20		
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	105.8 tons/A												70.5 tons/A		
P Removal Balance Manure Rate (ton or gal/A, if required by P Index)	10 tons/A												12.7 tons/A		
	Crop P Removal (lb/A)		60.0										Crop P Removal (lb/A)		76.0
P Index Value															
Planned Manure Rate (ton or gal/A)	17		ton/A										26		ton/A
Nutrient Balance after Manure	138	-102	160	200	60	210	0	80	90	200	0	140	69	-76	-142
Supplemental Fertilizer (lb/A)	138	0	160	200	60	210	0	80	90	200	0	140	69	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	0	-102	0	0	0	0	0	0	0	0	0	0	0	-76	-142
Manure Utilized on CMU	116 tons			0			0			0			247 tons		

App. 4: Crop Yrs. 2017 CMU/Field ID	Field 14			Field 15			Field 16			Field 17			Field 18		
Acres	3.3			5.8			4.0			8.9			12.4		
Soil Test Report Date	August 25, 2015			Ausust 25, 2015			August 25, 2015			August 25, 2015			August 25, 2015		
Laboratory Name	PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	17	65	5.7	20	73	5.4	17	55	5.7	18	78	5.5	15	67	5.3
P Index Part A	No to all Part A ques.			No to all Part A ques.			No to all Part A ques.			No to all Part A ques.			No to all Part A ques.		
	N-based			N-based			N-based			N-based			N-based		
Crop	Grass hay			Grass hay			Grass hay			Corn Grain			Alfalfa		
Planned Yield	4 ton/A			4 ton/A			4 ton/A			190 bu/A			4 ton/A		
Soil Test Recommendation (lb/Acre)	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
	200	100	220	200	80	210	200	100	220	190	100	80	0	120	220
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0	0	0	0	60	0	60	0	0	0
P Index Application Method															
Manure History Description	Frequently - Summer Crop			Frequently - Summer Crop			Frequently - Summer Crop			Rarely - Summer Crop			Rarely - Summer Crop		
Residual Manure N (lb/A)	20			20			20			0			0		
Legume History Description Residual Legume N (lb/A)	Select a Previous Legume N Scenario			Select a Previous Legume N Scenario			Select a Previous Legume N Scenario			Select a Previous Legume N Scenario			Select a Previous Legume N Scenario		
Net Nutrients Required (lb/A)	180	100	220	180	80	210	180	100	220	130	100	20	0	120	220
Manure Group	Dairy-Heifer-Fall			Dairy-Heifer-Fall			Dairy-Heifer-Spring						Select a Manure Group		
Application Season Application Management (Incorporation, cover crops, etc.)	Spring/Summer: 1,2-15		Incorporated after 7 days	Spring/Summer: 1,2-15		Incorporated after 7 days	Late Fall		Spring use by grass or small grains				Select Manure Application Timing		Select Manure Application Method
Availability Factors	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N
(Total N or NH4-N & Organic N)		0.10	0.35		0.10	0.35	0.40								
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	84.5 tons/A			84.5 tons/A			58.4 tons/A								
P Removal Balance Manure Rate	15.3 tons/A			15.3 tons/A			15.3 tons/A								
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A)		60.0	Crop P Removal (lb/A)		60.0	Crop P Removal (lb/A)		60.0						
P Index Value															
Planned Manure Rate (ton or gal/A)	10		ton/A	10		ton/A	10		ton/A						
Nutrient Balance after Manure	159	61	63	159	41	53	149	61	63	130	100	20	0	120	220
Supplemental Fertilizer (lb/A)	159	61	63	159	41	53	149	61	63	130	100	20	0	120	220
P Index Application Method															
Final Nutrient Balance (lb/A)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manure Utilized on CMU	33 tons			58 tons			40 tons			0			0		

Mizerak-Soils



* 1184.0 feet per inch

0 592 1184 1776 2368 feet

N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 12/08/15

Soil Acreages By Field

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
1	1	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	4.7	Somewhat poorly drained	Farmland of statewide importance	3	0.32
1	1	OfB	Oquaga flaggy loam, 3 to 8 percent slopes	Oquaga	85	0.73	Well drained	Farmland of statewide importance	3	0.37
1	1	OfC	Oquaga flaggy loam, 8 to 15 percent slopes	Oquaga	85	< 0.01	Well drained	Farmland of statewide importance	3	0.37
1	1	OxD	Oquaga extremely stony loam, 8 to 25 percent slopes	Oquaga	85	0.21	Well drained	Not prime farmland	3	0.37
1	1	WcC	Wellsboro channery loam, 8 to 15 percent slopes	Wellsboro	85	0.29	Moderately well drained	Farmland of statewide importance	3	0.32
10	10	ArC	Arnot very channery silt loam, very rocky, 3 to 15 percent slopes	Arnot	90	0.66	Somewhat excessively drained	Not prime farmland	2	0.28
10	10	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	3.31	Somewhat poorly drained	Farmland of statewide importance	3	0.32
10	10	MsC	Morris flaggy loam, 8 to 15 percent slopes	Morris	83	0.28	Somewhat poorly drained	Farmland of statewide importance	3	0.32
10	10	OcC	Oquaga channery loam, 8 to 15 percent slopes	Oquaga	85	1.74	Well drained	Farmland of statewide importance	3	0.37
10	10	OxD	Oquaga extremely stony loam, 8 to 25 percent slopes	Oquaga	85	0.07	Well drained	Not prime farmland	3	0.37
11	11	NxB	Norwich and Chippewa extremely stony silt loams, 0 to 8 percent slopes	Norwich	50	0.56	Very poorly drained	Not prime farmland	3	0.32

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
11	11	NxB	Norwich and Chippewa extremely stony silt loams, 0 to 8 percent slopes	Chippewa	45	0.51	Very poorly drained	Not prime farmland	3	0.28
11	11	OxB	Oquaga extremely stony loam, 3 to 8 percent slopes	Oquaga	85	1.89	Well drained	Not prime farmland	3	0.37
11	11	OxD	Oquaga extremely stony loam, 8 to 25 percent slopes	Oquaga	85	0.51	Well drained	Not prime farmland	3	0.37
12	12	LCE	Lackawanna and Bath extremely stony loams, steep	Lackawanna	40	< 0.01	Well drained	Not prime farmland	3	0.32
12	12	LCE	Lackawanna and Bath extremely stony loams, steep	Bath	30	< 0.01	Well drained	Not prime farmland	3	0.32
12	12	MrC	Morris channery loam, 8 to 18 percent slopes	Morris	80	0.04	Somewhat poorly drained	Farmland of statewide importance	3	0.32
12	12	NxB	Norwich and Chippewa extremely stony silt loams, 0 to 8 percent slopes	Norwich	50	< 0.01	Very poorly drained	Not prime farmland	3	0.32
12	12	NxB	Norwich and Chippewa extremely stony silt loams, 0 to 8 percent slopes	Chippewa	45	< 0.01	Very poorly drained	Not prime farmland	3	0.28
12	12	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	1.34	Well drained	Farmland of statewide importance	3	0.37
12	12	OcC	Oquaga channery loam, 8 to 15 percent slopes	Oquaga	85	4.61	Well drained	Farmland of statewide importance	3	0.37
12	12	OfC	Oquaga flaggy loam, 8 to 15 percent slopes	Oquaga	85	6.2	Well drained	Farmland of statewide importance	3	0.37
13	13	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	4.02	Somewhat poorly drained	Farmland of statewide importance	3	0.32

Soil Acreages By Field

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
1	1	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	4.7	Somewhat poorly drained	Farmland of statewide importance	3	0.32
1	1	OfB	Oquaga flaggy loam, 3 to 8 percent slopes	Oquaga	85	0.73	Well drained	Farmland of statewide importance	3	0.37
1	1	OfC	Oquaga flaggy loam, 8 to 15 percent slopes	Oquaga	85	< 0.01	Well drained	Farmland of statewide importance	3	0.37
1	1	OxD	Oquaga extremely stony loam, 8 to 25 percent slopes	Oquaga	85	0.21	Well drained	Not prime farmland	3	0.37
1	1	WcC	Wellsboro channery loam, 8 to 15 percent slopes	Wellsboro	85	0.29	Moderately well drained	Farmland of statewide importance	3	0.32
10	10	ArC	Arnot very channery silt loam, very rocky, 3 to 15 percent slopes	Arnot	90	0.66	Somewhat excessively drained	Not prime farmland	2	0.28
10	10	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	3.31	Somewhat poorly drained	Farmland of statewide importance	3	0.32
10	10	MsC	Morris flaggy loam, 8 to 15 percent slopes	Morris	83	0.28	Somewhat poorly drained	Farmland of statewide importance	3	0.32
10	10	OcC	Oquaga channery loam, 8 to 15 percent slopes	Oquaga	85	1.74	Well drained	Farmland of statewide importance	3	0.37
10	10	OxD	Oquaga extremely stony loam, 8 to 25 percent slopes	Oquaga	85	0.07	Well drained	Not prime farmland	3	0.37
11	11	NxB	Norwich and Chippewa extremely stony silt loams, 0 to 8 percent slopes	Norwich	50	0.56	Very poorly drained	Not prime farmland	3	0.32

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
15	15	MsB	Morris flaggy loam, 3 to 8 percent slopes	Morris	75	< 0.01	Somewhat poorly drained	Farmland of statewide importance	3	0.32
15	15	MsC	Morris flaggy loam, 8 to 15 percent slopes	Morris	83	4.68	Somewhat poorly drained	Farmland of statewide importance	3	0.32
16	16	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	< 0.01	Somewhat poorly drained	Farmland of statewide importance	3	0.32
16	16	MsC	Morris flaggy loam, 8 to 15 percent slopes	Morris	83	3.98	Somewhat poorly drained	Farmland of statewide importance	3	0.32
16	16	OxB	Oquaga extremely stony loam, 3 to 8 percent slopes	Oquaga	85	0.01	Well drained	Not prime farmland	3	0.37
17	17	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	8.89	Somewhat poorly drained	Farmland of statewide importance	3	0.32
18	18	MrA	Morris channery loam, 0 to 3 percent slopes	Morris	73	2.32	Somewhat poorly drained	Farmland of statewide importance	3	0.32
18	18	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	9.15	Somewhat poorly drained	Farmland of statewide importance	3	0.32
18	18	MsB	Morris flaggy loam, 3 to 8 percent slopes	Morris	75	0.95	Somewhat poorly drained	Farmland of statewide importance	3	0.32
19	19	MrA	Morris channery loam, 0 to 3 percent slopes	Morris	73	4.16	Somewhat poorly drained	Farmland of statewide importance	3	0.32
19	19	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	0.14	Somewhat poorly drained	Farmland of statewide importance	3	0.32
2	2	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	3.81	Somewhat poorly drained	Farmland of statewide importance	3	0.32

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
2	2	MsC	Morris flaggy loam, 8 to 15 percent slopes	Morris	83	1.37	Somewhat poorly drained	Farmland of statewide importance	3	0.32
2	2	OfB	Oquaga flaggy loam, 3 to 8 percent slopes	Oquaga	85	1.88	Well drained	Farmland of statewide importance	3	0.37
3	3	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	0.91	Somewhat poorly drained	Farmland of statewide importance	3	0.32
3	3	MrC	Morris channery loam, 8 to 18 percent slopes	Morris	80	3.76	Somewhat poorly drained	Farmland of statewide importance	3	0.32
4	4	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	1.9	Somewhat poorly drained	Farmland of statewide importance	3	0.32
4	4	VcB	Volusia channery silt loam, 3 to 8 percent slopes	Volusia	90	1.13	Somewhat poorly drained	Farmland of statewide importance	3	0.37
5	5	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	1.19	Somewhat poorly drained	Farmland of statewide importance	3	0.32
5	5	SxD	Swartswood extremely stony loam, 8 to 25 percent slopes	Swartswood	85	0.57	Well drained	Not prime farmland	3	0.28
5	5	VcB	Volusia channery silt loam, 3 to 8 percent slopes	Volusia	90	11.71	Somewhat poorly drained	Farmland of statewide importance	3	0.37
6	6	SxD	Swartswood extremely stony loam, 8 to 25 percent slopes	Swartswood	85	4.46	Well drained	Not prime farmland	3	0.28
6	6	VcB	Volusia channery silt loam, 3 to 8 percent slopes	Volusia	90	0.58	Somewhat poorly drained	Farmland of statewide importance	3	0.37
7a	7a	VcB	Volusia channery silt loam, 3 to 8 percent slopes	Volusia	90	4.08	Somewhat poorly drained	Farmland of statewide importance	3	0.37

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
7b	7b	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	0.77	Somewhat poorly drained	Farmland of statewide importance	3	0.32
7b	7b	VcB	Volusia channery silt loam, 3 to 8 percent slopes	Volusia	90	11.62	Somewhat poorly drained	Farmland of statewide importance	3	0.37
7b	7b	VcC	Volusia channery silt loam, 8 to 18 percent slopes	Volusia	90	0.67	Somewhat poorly drained	Farmland of statewide importance	3	0.37
8a	8a	VcC	Volusia channery silt loam, 8 to 18 percent slopes	Volusia	90	1.13	Somewhat poorly drained	Farmland of statewide importance	3	0.37
8b	8b	VcB	Volusia channery silt loam, 3 to 8 percent slopes	Volusia	90	2.77	Somewhat poorly drained	Farmland of statewide importance	3	0.37
8b	8b	VcC	Volusia channery silt loam, 8 to 18 percent slopes	Volusia	90	1.01	Somewhat poorly drained	Farmland of statewide importance	3	0.37
9	9	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	1.15	Somewhat poorly drained	Farmland of statewide importance	3	0.32
9	9	MrC	Morris channery loam, 8 to 18 percent slopes	Morris	80	4.26	Somewhat poorly drained	Farmland of statewide importance	3	0.32
9	9	MsC	Morris flaggy loam, 8 to 15 percent slopes	Morris	83	1.2	Somewhat poorly drained	Farmland of statewide importance	3	0.32
9	9	OfB	Oquaga flaggy loam, 3 to 8 percent slopes	Oquaga	85	< 0.01	Well drained	Farmland of statewide importance	3	0.37
9	9	OxD	Oquaga extremely stony loam, 8 to 25 percent slopes	Oquaga	85	0.2	Well drained	Not prime farmland	3	0.37
Farmstead	Farmstead	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	3.13	Somewhat poorly drained	Farmland of statewide importance	3	0.32

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
Farmstead	Farmstead	MrC	Morris channery loam, 8 to 18 percent slopes	Morris	80	0.03	Somewhat poorly drained	Farmland of statewide importance	3	0.32
Farmstead	Farmstead	OfB	Oquaga flaggy loam, 3 to 8 percent slopes	Oquaga	85	< 0.01	Well drained	Farmland of statewide importance	3	0.37
P1	P1	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	6.55	Somewhat poorly drained	Farmland of statewide importance	3	0.32
P1	P1	MrC	Morris channery loam, 8 to 18 percent slopes	Morris	80	0.93	Somewhat poorly drained	Farmland of statewide importance	3	0.32
P1	P1	NcB	Norwich and Chippewa channery silt loams, 3 to 8 percent slopes	Norwich	50	0.01	Very poorly drained	Not prime farmland	3	0.32
P1	P1	NcB	Norwich and Chippewa channery silt loams, 3 to 8 percent slopes	Chippewa	44	0.01	Very poorly drained	Not prime farmland	3	0.28
P1	P1	SxD	Swartswood extremely stony loam, 8 to 25 percent slopes	Swartswood	85	0.91	Well drained	Not prime farmland	3	0.28

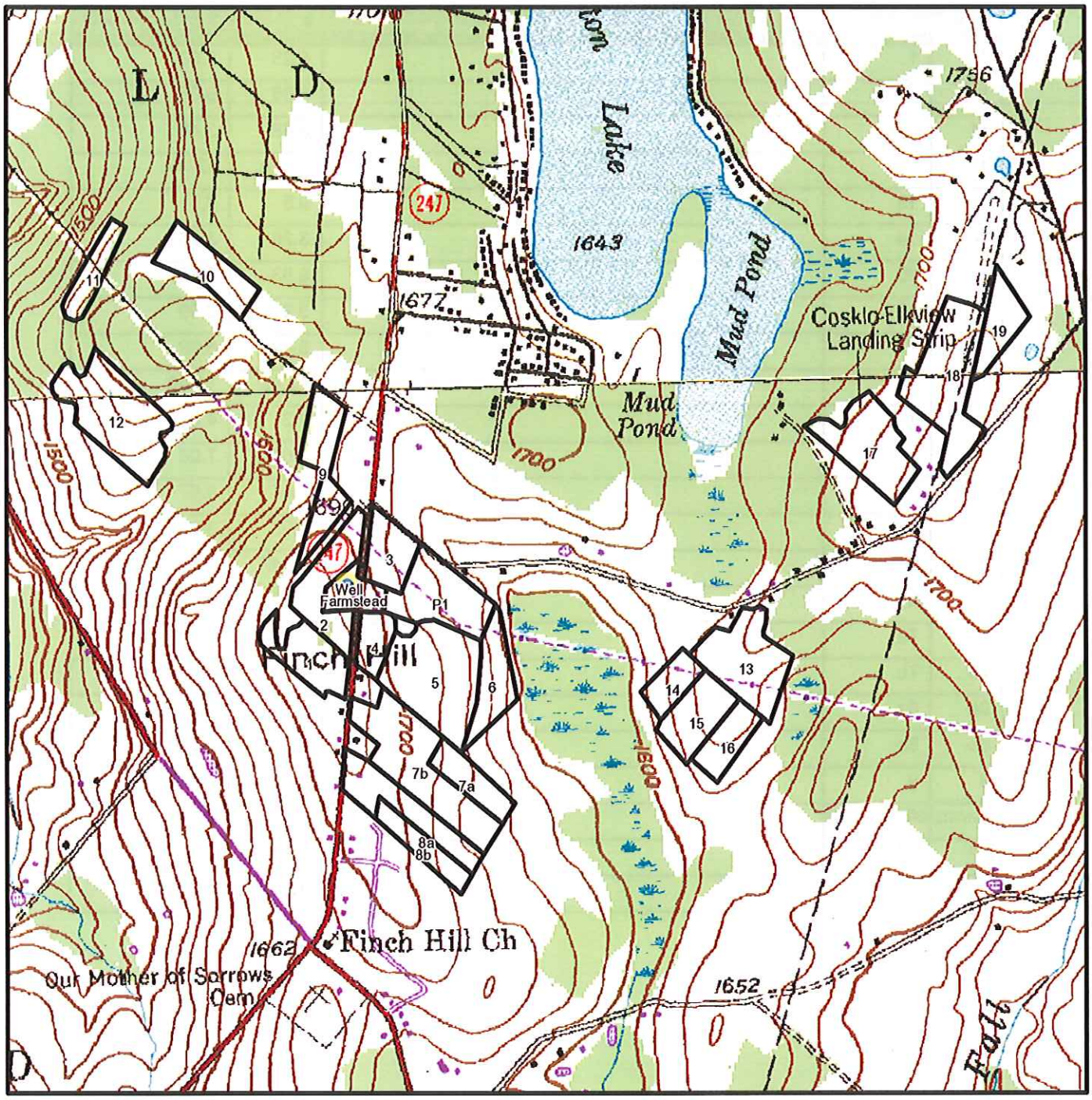
Soil Acreages For Farm

Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	50.78	Somewhat poorly drained	Farmland of statewide importance	3	0.32
MsC	Morris flaggy loam, 8 to 15 percent slopes	Morris	83	16.97	Somewhat poorly drained	Farmland of statewide importance	3	0.32
OfB	Oquaga flaggy loam, 3 to 8 percent slopes	Oquaga	85	2.61	Well drained	Farmland of statewide importance	3	0.37

Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
OfC	Oquaga flaggy loam, 8 to 15 percent slopes	Oquaga	85	6.2	Well drained	Farmland of statewide importance	3	0.37
OxD	Oquaga extremely stony loam, 8 to 25 percent slopes	Oquaga	85	0.99	Well drained	Not prime farmland	3	0.37
WcC	Wellsboro channery loam, 8 to 15 percent slopes	Wellsboro	85	0.29	Moderately well drained	Farmland of statewide importance	3	0.32
MrC	Morris channery loam, 8 to 18 percent slopes	Morris	80	9.02	Somewhat poorly drained	Farmland of statewide importance	3	0.32
VcB	Volusia channery silt loam, 3 to 8 percent slopes	Volusia	90	31.89	Somewhat poorly drained	Farmland of statewide importance	3	0.37
SxD	Swartswood extremely stony loam, 8 to 25 percent slopes	Swartswood	85	5.94	Well drained	Not prime farmland	3	0.28
NcB	Norwich and Chippewa channery silt loams, 3 to 8 percent slopes	Norwich	50	0.01	Very poorly drained	Not prime farmland	3	0.32
NcB	Norwich and Chippewa channery silt loams, 3 to 8 percent slopes	Chippewa	44	0.01	Very poorly drained	Not prime farmland	3	0.28
VcC	Volusia channery silt loam, 8 to 18 percent slopes	Volusia	90	2.81	Somewhat poorly drained	Farmland of statewide importance	3	0.37
ArC	Arnot very channery silt loam, very rocky, 3 to 15 percent slopes	Arnot	90	0.66	Somewhat excessively drained	Not prime farmland	2	0.28
OcC	Oquaga channery loam, 8 to 15 percent slopes	Oquaga	85	6.35	Well drained	Farmland of statewide importance	3	0.37
NxB	Norwich and Chippewa extremely stony silt loams, 0 to 8 percent slopes	Norwich	50	0.7	Very poorly drained	Not prime farmland	3	0.32

Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
NxB	Norwich and Chippewa extremely stony silt loams, 0 to 8 percent slopes	Chippewa	45	0.65	Very poorly drained	Not prime farmland	3	0.28
OxB	Oquaga extremely stony loam, 3 to 8 percent slopes	Oquaga	85	2.46	Well drained	Not prime farmland	3	0.37
LCE	Lackawanna and Bath extremely stony loams, steep	Lackawanna	40	0	Well drained	Not prime farmland	3	0.32
LCE	Lackawanna and Bath extremely stony loams, steep	Bath	30	0	Well drained	Not prime farmland	3	0.32
OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	1.34	Well drained	Farmland of statewide importance	3	0.37
MsB	Morris flaggy loam, 3 to 8 percent slopes	Morris	75	3.38	Somewhat poorly drained	Farmland of statewide importance	3	0.32
MrA	Morris channery loam, 0 to 3 percent slopes	Morris	73	6.48	Somewhat poorly drained	Farmland of statewide importance	3	0.32

Mizerak-Topographic



* 1184.0 feet per inch

0 592 1184 1776 2368 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

N

Field Acreages

Field	Label	Description	Acres	Suitable Acres
1	1		5.93	5.93
10	10		6.06	6.06
11	11		3.48	3.48
12	12		12.19	12.19
13	13		9.5	9.5
14	14		3.26	3.26
15	15		5.83	5.83
16	16		3.99	3.99
17	17		8.89	8.89
18	18		12.42	12.42
19	19		4.3	4.3
2	2		7.06	7.06
3	3		4.67	4.67
4	4		3.03	3.03
5	5		13.47	13.47
6	6		5.32	5.32
7a	7a		4.08	4.08
7b	7b		13.06	13.06
8a	8a		7	7
8b	8b		3.78	3.78
9	9		6.81	6.81
Farmstead	Farmstead		3.16	2.44
P1	P1		8.41	8.41
		Totals	**155.7**	**154.98**

Appendix 10

Supporting Information & Documentation

Includes if applicable the Rainfall Additions Worksheet, Winter Application Matrix, Residual N Calculation Worksheet and other supplemental worksheets included in the NMP Spreadsheet. Attach information and documentation necessary to support plan content not included elsewhere in the NMP Spreadsheet or appendices. Examples include, but are not limited to, documentation of animal weights if Agronomy Facts 54 is not used, bedding calculations, or calculations for irrigation rates.

Items included are:

Winter Application Matrix
Bedding Calculation
Emergency Response Plan
P-Index Fields: Soil Loss Calculations

PA Technical Manual Supplement 10: Winter Manure Application Matrix (10/2009)

User Notes for the Winter Manure Application Matrix

1. Under Act 38, any one of the following conditions meets the "winter" definition - see §83.201.
   - December 15 to February 28
   - Frozen ground (4 inch depth)
   - Snow-covered ground
2. All setbacks including those specific to winter manure application must be followed - see §83.294 (f) and (g).
   - No winter manure application within 100 ft. of an above ground agricultural drainage inlet where surface flow is toward the inlet.
   - No winter manure application within 100 ft. of a wetland (identified on National Wetland Inventory Maps) within the 100 year floodplain of an Exceptional Va segment if surface flow is toward the wetland.
3. Fields receiving winter manure applications must have 25% cover or an established cover crop - see §83.294 (g).

To begin for each CMU, 1. Enter the CMU ID and 2. Verify the CMU meets the required cover conditions described in User Note 3.

CMU ID	Field 1
Does the CMU have 25% cover or an established cover crop?	Yes

To continue for each CMU, 1. Choose the appropriate Evaluation Criteria Description and 2. Enter the corresponding Ranking Value in the last column.

	Evaluation Criteria Descriptions and Ranking Values				
	4	3	2[b]	1[c]	Field 1
Field Slope	< 4 %	4 - 8%	9 - 15%	> 15%	3
Distance from Water Bodies[a]	> 350 ft.	350 - 200 ft	199 - 100 ft	<100 ft	4
Drainage Class Determined using Phosphorus Index Drainage Class Determination	Somewhat Excessively OR Excessively	Well OR Moderately Well	Somewhat Poorly	Poorly OR Very Poorly	2
Runoff Control	Recommended conservation practices are in place. **Very low potential for concentrated flow.**	Some conservation practices are in place. **Low potential for concentrated flow.**	Some conservation practices are in place. **Moderate potential for concentrated flow.**	No conservation practices are in place. **High potential for concentrated flow.**	3
					12
					Fair

[a] Includes Perennial and Intermittent streams with defined bed and bank, Lakes, Ponds, Open sinkholes, and Active private and public water sources.

[b] If a field receives a rating of "2" in any two categories the field is not recommended for winter application regardless of the final field Ranking Value.

[c] If a field receives a rating of "1" in any one category the field is not recommended for winter application regardless of the final field Ranking Value.

Recommended Winter Manure Application Prioritization

Ranking Value	*Ranking Category*	*Recommendation for Winter Manure Spreading Prioritization*
Greater than 12	Good	These fields should receive first priority for winter manure application.
8 to 12	Fair	These fields should receive second priority for winter manure application.
Less than 8	Poor	These fields are not recommended for winter manure application.

Go to NMP Index
Go to Appendix 4

lue stream

Field 2	Field 3
Yes	Yes

Field 2	Field 3
3	3
4	4
2	2
3	3
12	12
Fair	Fair

Bedding Calculation: Mizerak Farm

-As per farmer, 1 round bale of hay (~600 lbs) is chopped and used for bedding every 2 weeks for dairy cows and calves.

600 lbs X 52 (weeks in year) / 2 (every other week) = 15,600 lbs **-Total Bedding**

15,600 lbs total bedding / 2000 lbs/ton = 7.8 tons -**Total Bedding**

Scenarios for field 1

Scenarios: current management Implementation Date:

Use Scenario For Plan Save Save As Delete

Field Characteristics

Conservation Practices new

Contouring: 2 - 4 % row grade

Strip/Barrier: Select

Diversion/Terrace: Select

Management Rotation

Rotation Year	Crop Planted Previous Year	First Crop	Second Crop	Third Crop
1		corn grain		
2		corn grain		
3		corn grain		
4		alfalfa_grass year 1		
5		alfalfa_grass year 2+ - full year		
6		alfalfa_grass year 2+ - full year		
7		alfalfa_grass year 2+ - full year		
8		alfalfa_grass year 2+ - full year		

Soil loss - t value: 3

Calculate Soil Loss calculated soil loss: 0.42 (t/ac/yr) allowable soil loss: 3 (t/ac/yr)

Scenarios for field 2

Scenarios: current management Implementation Date:

Use Scenario For Plan Save Save As Delete

Field Characteristics

Conservation Practices new

Contouring: 2 - 4 % row grade

Strip/Barrier: Select

Diversion/Terrace: Select

Management Rotation

Rotation Year	Crop Planted Previous Year	First Crop	Second Crop	Third Crop
1		corn grain		
2		corn grain		
3		corn grain		
4		alfalfa_grass year 1		
5		alfalfa_grass year 2+ - full year		
6		alfalfa_grass year 2+ - full year		
7		alfalfa_grass year 2+ - full year		
8		alfalfa_grass year 2+ - full year		

Soil loss - t value: 3

Calculate Soil Loss calculated soil loss: 0.47 (t/ac/yr) allowable soil loss: 3 (t/ac/yr)

Scenarios for field 3

Scenarios: current management Implementation Date:

Use Scenario For Plan Save Save As Delete

Field Characteristics

Conservation Practices new

Contouring: 2 - 4 % row grade

Strip/Barrier: Select

Diversion/Terrace: Select

Management Rotation

Rotation Year	Crop Planted Previous Year	First Crop	Second Crop	Third Crop
1		corn grain		
2		corn grain		
3		corn grain		
4		alfalfa_grass year 1		
5		alfalfa_grass year 2+ - full year		
6		alfalfa_grass year 2+ - full year		
7		alfalfa_grass year 2+ - full year		
8		alfalfa_grass year 2+ - full year		

Soil loss - t value: 3

Calculate Soil Loss calculated soil loss: 0.65 (t/ac/yr) allowable soil loss: 3 (t/ac/yr)

Scenarios for field 4

Scenarios: current management Implementation Date:

Use Scenario For Plan Save Save As Delete

Field Characteristics

Conservation Practices new

Contouring: 2 - 4 % row grade

Strip/Barrier: Select

Diversion/Terrace: Select

Management Rotation

Rotation Year	Crop Planted Previous Year	First Crop	Second Crop	Third Crop
1		corn grain		
2		corn grain		
3		corn grain		
4		alfalfa_grass year 1		
5		alfalfa_grass year 2+ - full year		
6		alfalfa_grass year 2+ - full year		
7		alfalfa_grass year 2+ - full year		
8		alfalfa_grass year 2+ - full year		

Soil loss - t value: 3

Calculate Soil Loss calculated soil loss: 0.62 (t/ac/yr) allowable soil loss: 3 (t/ac/yr)

Scenarios for field 5

Scenarios: current management Implementation Date:

Use Scenario For Plan Save Save As Delete

Field Characteristics

Conservation Practices new

Contouring: 2 - 4 % row grade

Strip/Barrier: Select

Diversion/Terrace: Select

Management Rotation

Rotation Year	Crop Planted Previous Year	First Crop	Second Crop	Third Crop
1		corn grain		
2		corn grain		
3		corn grain		
4		alfalfa_grass year 1		
5		alfalfa_grass year 2+ - full year		
6		alfalfa_grass year 2+ - full year		
7		alfalfa_grass year 2+ - full year		
8		alfalfa_grass year 2+ - full year		

Soil loss - t value: 3

Calculate Soil Loss calculated soil loss: 0.57 (t/ac/yr) allowable soil loss: 3 (t/ac/yr)

Scenarios for field P1

Scenarios: current management Implementation Date:

Use Scenario For Plan Save Save As Delete

Field Characteristics

Conservation Practices new

Contouring: greater than 8% row grade

Strip/Barrier: Select

Diversion/Terrace: Select

Management Rotation

Rotation Year	Crop Planted Previous Year	First Crop	Second Crop	Third Crop
1		hay year 2+ - full year		

Soil loss - t value: 3

Calculate Soil Loss calculated soil loss: 0.24 (t/ac/yr) allowable soil loss: 3 (t/ac/yr)

Emergency Response Plan

Developed for: **ANDREW MIZERAK FARM**

If an emergency manure spill or leak should occur you need to take the following actions:

1) Ensure you and other people are safe, if the spill or leak involves a public road:
   a. Contact police for traffic control
      -Greenfield Township Police Department: (570) 267-0098

   b. Use flares, safety cones, etc to warn approaching motorists

2) Stop the leak or spill
   a. If the leak or spill happens while emptying the storage:
      - Stop pumps, close valves, and/or stop siphoning of manure
      - Park on top of flexible piping to pinch it closed
      - If necessary, direct manure to another storage structure
      - Plug holes in the impoundment, build dams to capture the leak and either pump the manure back into storage or spread it on fields
   b. If the leak or spill happens while on the road:
      - Pull off the side of the road
      - Plug the leak or otherwise stop the flow of manure from the tank
      - Build a berm or dike to keep manure from flowing into streams, ditch, etc
      - Call the police to direct traffic
        -Greenfield Township Police Department: (570) 267-0098

3) Contain and control the leak or spill:
   a. Build containment dam to capture the manure. Use soil, gravel, hay bales, etc. Provide an area for the impounded manure to run into and be temporarily stored. Limit the area in contact with the manure. Use a contractor if necessary. Some local contractors or others with equipment in the area are:
      Contractor _____ _____
      Contractor _____ _____
   b. Prevent manure from running into streams, ditches, etc
   c. Use absorbent material to soak up the manure, such as straw, hay, sawdust, animal feed, or soil to limit or stop the flow
   d. Check for contaminated subsurface tile lines and divert flow from tile inlets

4) Notify the proper authorities:

Pa DEP, Emergency Response number:	**877-333-1904**
Lackawanna County Conservation District	**570-382-3086**
PA Fish and Boat Commission:	**570-477-5717**
Your nutrient management planner:	**570-382-3086**

   a. Make a record of details of the spill and actions you took. Take pictures of the extent of the spill and your containment and cleanup practices.
   b. If a spill enters a sinkhole or otherwise has the potential to enter groundwater, notify adjacent landowners who use private wells for their water supply.

5) Clean up the leak or spill:
   a. This may be directed by the authorities listed above.
   b. Pick up absorbent material you used and properly dispose of the material
   c. Restore the damaged area if necessary

Susquehanna County Conservation District
88 Chenango Street
Montrose, PA 18801

(570) 278-4600 Ext. 3050
suscondistrict.org

Eric Johnson
1038 Montdale Rd. Suite 109
Scott Township, PA 18447

Re: Technical review of Mizerak Nutrient Management Plan (NMP)

Dear Mr. Johnson,
The Susquehanna County Conservation District (SCCD) received the Nutrient Management Plan (NMP) for the Mizerak animal operation located at 431 Rt 247 Greenfield Township Pa 18407 on December 8, 2015. The NMP was deemed administratively complete on December 9, 2015. I have completed my technical review and have deemed it in Final Form on December 29, 2015.

This plan will be presented at the SCC's January 12, 2016 meeting for final approval.

If you have any further questions don't hesitate to ask. Please feel free to call me at 570-278-4600 ext. 3052, or email at cbedene@suscondistrict.org. Thank you.

Sincerely,

Christie Bedene
Susquehanna County Conservation District
Chesapeake Bay Specialist/Resource Conservationist

CC: Michael Aucoin and Michael Walker

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: January 5, 2016

TO: Karl G. Brown, Executive Secretary
State Conservation Commission

FROM: Michael J. Walker, NM Regional Coordinator
State Conservation Commission
and
Wesley Congdon, Nutrient Management Technician
Susquehanna County Conservation District

SUBJECT: Nutrient Management Plan Review (1)
Lackawanna County, Pennsylvania

Action Requested

Action on a Nutrient Management Plan for the following operation in Lackawanna County:

1. Thomas Wright Dairy Farm, (Home) 83 Scott Road, Clifford Township, PA 18470, (Farm) 223 Creamery Road, Jermyn, PA 18433 (crop year 2017)

Background

Wesley Congdon, Susquehanna County Conservation District and I have completed the required review of the subject nutrient management plan listed above. Final corrections to the plan were received at the PDA Region 2 office on January 4, 2016. As of that date, the plan was considered to be in its final form. The operation, located in Lackawanna County, is considered to be a volunteer animal operation (VAO) under the PA Nutrient and Odor Management Act. The Commission is the proper authority to take action on this plan, because Lackawanna County Conservation District has not been delegated plan review and action responsibilities (Level II) under the PA Nutrient and Odor Management Act Program.

A brief description of the operation, concluding with the staff recommendation, is attached. Also attached is a copy of the complete nutrient management plan for the operation.

Thank you for considering this plan for Commission action.

Farm Descriptions

1. Thomas Wright Dairy Farm NMP, (Home address) 83 Scott Road, Clifford Township, PA 18470, (Farm address) 223 Creamery Road, Jermyn, PA 18433 (crop year 2017), Lackawanna County – Thomas Wright is leasing a farm at 223 Creamery Road, Jermyn, PA and is operating a dairy operation. The operation consists of 110.22 total acres of which there are 68.17 acres of hay and 26.04 acres of corn silage and 12.65 of permanent pasture and 3.36 acres of farmstead. The crop rotation is continuous corn grain and continuous hay. Fields growing corn grain will be planted with a cover crop each fall and burnt off in the spring prior to planting the following corn crop. Wright dairy farm averages 40 dairy cows, 20 heifers and 10 calves on this operation. This is a mix bread dairy operation with approximately half the dairy animals are Holstein and the other half are Jersey cows. All manure is handled as a solid and is spread every other day or on an as needed basis. There is no manure storage on the operation. The milking cows are allowed access to pasture from April through November (approximately 180 days per year) for approximately 18 hours per day. The heifers and calves are confined to the barn throughout the year. All collected manure is planned to be land applied to crop fields listed in the NMP throughout the year. The combined animal equivalent units on Thomas Wright animal operation are planned at 61.15. The animal equivalent units per acre equals to 0.57, classifying the operation as a volunteer animal operation under Act 38 of 2005.

Approximately 1112 tons of manure is generated at the Wright dairy operation. Approximately 329 tons of the manure is land applied to the pasture from the milking herd and the remaining 783 tons is land applied to the crop land on this operation.

BMPs listed to be implemented on the Thomas Wright dairy operation include: Vegetative Waste Treatment Area, Pumping plant, Waste Transfer and Underground outlet. These proposed BMPs are needed on Wright dairy operation to protect water quality.

Based on Wes Congdon and my review, the NMP developed for Thomas Wright dairy operation meets the requirements of the PA Nutrient and Odor Management Act and Regulations, and I therefore recommend Commission approval.

Nutrient Management Plan

For Crop Years(s)
2017

Prepared for

Thomas Wright
(HOME) 83 Scott Road, Clifford Township; PA 18470
(FARM) 223 Creamery Road, Jermyn, PA 18433

570-222-3477

Prepared by

Eric H Johnson
2008-NMPD
1038 Montdale Road, Suite 109
Scott Township, PA 18447

570-382-3086

Date of Plan Submission

12/8/15

Date(s) of Plan Update Submissions

(updates to approved plan not requiring board action)

FINAL FORM
This version of the plan will be considered
for action by the ~~Conservation District~~ SCC
Board at their January 22, 2016 meeting
January 4, 2016
MONTH, DAY AND YEAR

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Appendix 5: Phosphorus Index
Appendix 6: Manure Management
Appendix 7: Stormwater Control
Appendix 8: Importer/Broker Agreements & Nutrient Balance Sheets
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- Topographic Map
- Soils Map

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Nutrient Management Plan Summary

Total acres reported in NMP Summary: 107.7

Crop Year(s) 2017

Whole Farm Note: When necessary to meet soil test recommendations, apply supplemental fertilizer (commercial) and/or lime at rates specified in plan and in provided soil test results/recommendations. Should manure be exhausted in any field and additional nutrients be required above planned amount, supplement as needed with commercial fertilizer. Utilize post-harvest, no-till cover crops for all corn silage ground and use as a "green manure."

CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate	Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[1]			Notes (Select "Yes")
							N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	
Field 1	5.91	Grass hay	Dairy-Spring	Spring	Incorporated after 7 days or none	14 ton/A	0	0	0	145	0	84	0	-76	0	No
Field 2a	2.58	Corn Silage	Dairy-Winter	Winter	For next summer use by corn or annuals-Green manure cover crop	14 ton/A	0	0	0	105	0	0	0	-76	-36	Yes
Field 2b	4.14	Grass hay	Dairy-Spring	Spring	Incorporated after 7 days or none	14 ton/A	0	0	0	145	0	0	0	-76	-36	No
Field 3a	4.21	Corn Silage	Dairy-Winter	Winter	For next summer use by corn or annuals-Green manure cover crop	14 ton/A	0	0	0	105	0	44	0	-76	0	Yes
Field 3b	6.84	Grass hay	Dairy-Summer	Spring/Summer: 1.2-15	Incorporated after 7 days	14 ton/A	0	0	0	134	0	44	0	-76	0	Yes
Field 4	4.28	Grass hay	Dairy-Summer	Summer	Incorporated after 7 days or none	14 ton/A	0	0	0	160	0	164	0	-76	0	Yes
Field 5	3.76	Grass hay	Dairy-Spring	Spring	Incorporated after 7 days or none	14 ton/A	0	0	0	160	0	124	0	-76	0	Yes
Field 6	12.38	Grass hay	No Manure	No Manure	No Manure	0	0	0	0	180	0	200	0	0	0	Yes

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit;
Negative numbers = nutrient excess

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 107.7

Crop Year(s) 2017

Whole Farm Note: When necessary to meet soil test recommendations, apply supplemental fertilizer (commercial) and/or lime at rates specified in plan and in provided soil test results/recommendations. Should manure be exhausted in any field and additional nutrients be required above planned amount, supplement as needed with commercial fertilizer. Utilize post-harvest, no-till cover crops for all corn silage ground and use as a "green manure."

CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate	Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[1]			Notes (Select "Yes")
							N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	
Field 7	4.21	Grass hay	Dairy-Fall	Early Fall	Spring use by winter crops or grass hay > Incorporated after 7 days or none	14 ton/A	0	0	0	160	0	174	0	-56	0	No
Field 8	7.02	Grass hay	No Manure	No Manure	No Manure	0	0	0	0	200	30	40	0	0	0	Yes
Field 9a	3.23	Grass hay	Dairy-Fall	Early Fall	Spring use by winter crops or grass hay > Incorporated after 7 days or none	14 ton/A	0	0	0	160	0	64	0	-26	0	No
Field 9b	4.01	Corn Silage	Dairy-Fall	Late Fall	For next summer use by corn or annuals-Green manure cover crop	14 ton/A	0	0	0	120	4	64	0	0	0	Yes
Field 10a	1.8	Corn Silage	Dairy-Fall	Late Fall	For next summer use by corn or annuals-Green manure cover crop	14 ton/A	0	0	0	120	0	64	0	-76	0	Yes
Field 10b	3.91	Grass hay	Dairy-Fall	Late Fall	Spring use by grass or small grains	8 ton/A	0	0	0	157	0	79	0	-43	0	Yes

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit;
Negative numbers = nutrient excess

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 107.7 **Crop Year(s)** 2017

Whole Farm Note: **When necessary to meet soil test recommendations, apply supplemental fertilizer (commercial) and/or lime at rates specified in plan and in provided soil test results/recommendations. Should manure be exhausted in any field and additional nutrients be required above planned amount, supplement as needed with commercial fertilizer. Utilize post-harvest, no-till cover crops for all corn silage ground and use as a "green manure."**

							Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[1]			Notes
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate	N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	(Select "Yes")
Field 11a	6.57	Corn Silage	Dairy-Winter	Winter	For next summer use by corn or annuals-Green manure cover crop	14 ton/A	0	0	0	120	0	24	0	-76	0	Yes
Field 11b	9.13	Grass hay	No Manure	No Manure	No Manure	0	0	0	0	180	0	60	0	0	0	Yes
Field 11c	2.73	Corn Silage	Dairy-Winter	Winter	For next summer use by corn or annuals-Green manure cover crop	14 ton/A	0	0	0	120	0	24	0	-76	0	Yes
Field 12a	4.14	Corn Silage	Dairy-Winter	Winter	For next summer use by corn or annuals-Green manure cover crop	14 ton/A	0	0	0	120	0	4	0	-76	0	Yes
Field 12b	4.21	Grass hay	No Manure	No Manure	No Manure	0	0	0	0	180	0	40	0	0	0	Yes
Pasture 1	12.65	Pasture	Dairy-Cow Fall - uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing See Notes	0	0	0	0	0	0	102	-26	-52	Yes

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit;
Negative numbers = nutrient excess

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 107.7

Crop Year(s) 2017

Whole Farm Note: When necessary to meet soil test recommendations, apply supplemental fertilizer (commercial) and/or lime at rates specified in plan and in provided soil test results/recommendations. Should manure be exhausted in any field and additional nutrients be required above planned amount, supplement as needed with commercial fertilizer. Utilize post-harvest, no-till cover crops for all corn silage ground and use as a "green manure."

CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate	Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[1]			Notes (Select "Yes")
							N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	
Pasture 1-2	12.65	Pasture	Dairy-Cow Spring - uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing See Notes	0	0	0	0	0	0				
Pasture 1-3	12.65	Pasture	Dairy-Cow Summer - uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing See Notes	0	0	0	0	0	0	63	-104	-208	

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit;
Negative numbers = nutrient excess

Nutrient Management Plan Summary Notes

Crop Years. 2017

CMU/Field ID	Notes
Field 2a	No-till cover crop planted post harvest and used as "green manure." Maintain 100' setback from any surface water, well heads, drainage inlets, etc. as noted in maps and ensure 25% cover as per Winter Application Regulations. Spreading permitted on snow/ice covered ground.
Field 3a	No-till cover crop planted post harvest and used as "green manure." Maintain 100' setback from any surface water, well heads, drainage inlets, etc. as noted in maps and ensure 25% cover as per Winter Application Regulations. Spreading permitted on snow/ice covered ground. Will use the last of Dairy-Winter manure group while spreading this field.
Field 3b	May begin summer spreading on this field with leftover manure from spring manure group (if applicable)
Field 4	Will use last of Dairy-Summer manure group while spreading this field.
Field 5	Should use last of Dairy-Spring manure group while spreading this field, any leftover manure can be used as start of summer
Field 6	No manure applied.
Field 8	No manure applied.
Field 9b	No-till cover crop planted post harvest and used as "green manure."
Field 10a	No-till cover crop planted post harvest and used as "green manure." Will use last of Dairy-Fall manure group while spreading this field.
Field 10b	Will use last of Dairy-Fall manure ground while spreading this field. **Use "light" manure rate on this field.**
Field 11a	No-till cover crop planted post harvest and used as "green manure."
Field 11b	No manure applied.
Field 11c	No-till cover crop planted post harvest and used as "green manure." Maintain 100' setback from any surface water, well heads, drainage inlets, etc. as noted in maps and ensure 25% cover as per Winter Application Regulations. Spreading permitted on snow/ice covered ground.
Field 12a	No-till cover crop planted post harvest and used as "green manure." Maintain 100' setback from any surface water, well heads, drainage inlets, etc. as noted in maps and ensure 25% cover as per Winter Application Regulations. Spreading permitted on snow/ice covered ground.
Field 12b	No manure applied.
Pasture 1	From May-November (6 months), 40 dairy cows will be let out to pasture when not being fed or milked in the barn (18 hours/day on pasture) Water is available on pasture as well as supplemental feed in turnout area on an as needed basis. No mechanical application of manure on this field. Collect manure from barnyard/feeding areas when feasible and continue to manage to promote dense, vegetated cover. **Although supplemental nitrogen is shown in NMP summary to acheive yield goal for pasture grass, we do not recommend application of commercial fertilizer on field.**

Manure Spreader Calibration Notes

Manure Application Rate	Manure Spreader Used	Spreader Settings	Tractor Used (if applicable)	Tractor Settings (speed, gear, rpm, pto, etc.)
8 ton/ac	Gehl Scavenger 1309	3 inch open	John Deere 2550	2nd gear, high range, 1200-1300 rpm
14 ton/ac	Gehl Scavenger 1309	5 inch open	John Deere 2550	2nd gear, high range, 1200-1300 rpm
30 ton/ac	Gehl Scavenger 1309	8 inch open	John Deere 2550	2nd gear, high range, 1200-1300 rpm

Additional Nutrient Management Plan Requirements

Manure Management and Stormwater BMP Implementation Summary

[1] - If applicable, enter USDA-NRCS Practice Code. For additional BMPs, enter the BMP description in the first blank cell.

Best Management Practice	NRCS Practice Code[1]	BMP Location	Implementation Season & Year
Waste Transfer System	634	Farmstead	Planned for Summer/Fall 2017
Pumping Plant for Waste Water Control	533	Farmstead	Planned for Summer/Fall 2017
Vegetated Treatment Area	635	Farmstead	Planned for Summer/Fall 2017
Underground Outlet (Barn Drain)	620	Farmstead	Planned for Summer/Fall 2017

In-Field Manure Stacking Procedures

Manure must be applied to the field within 120 days of stacking or the stacks must be covered. Stacks must be implemented and maintained according to sound BMPs, addressing concerns such as soil type, soil slope, shape of the pile, setbacks, and rotation of piles.

Should stacking be required on the operation, it will be done in the area shown on operation map, located in field 3a. This location is on dry ground, away from surface water, yet is close enough to the main barns to make it a feasible location.

Additional CAFO Requirements

In-field stacking criteria, winter storage requirements, and other issues identified by DEP's review of the nutrient management plan.

None

Proposed Manure Storage Description

Type, dimensions, volume, freeboard and location on map.

None

Description of Planned Alternative Manure Technology Practices

Type of practice, volume of manure addressed, and result of practice.

None

Exported Manure Summary

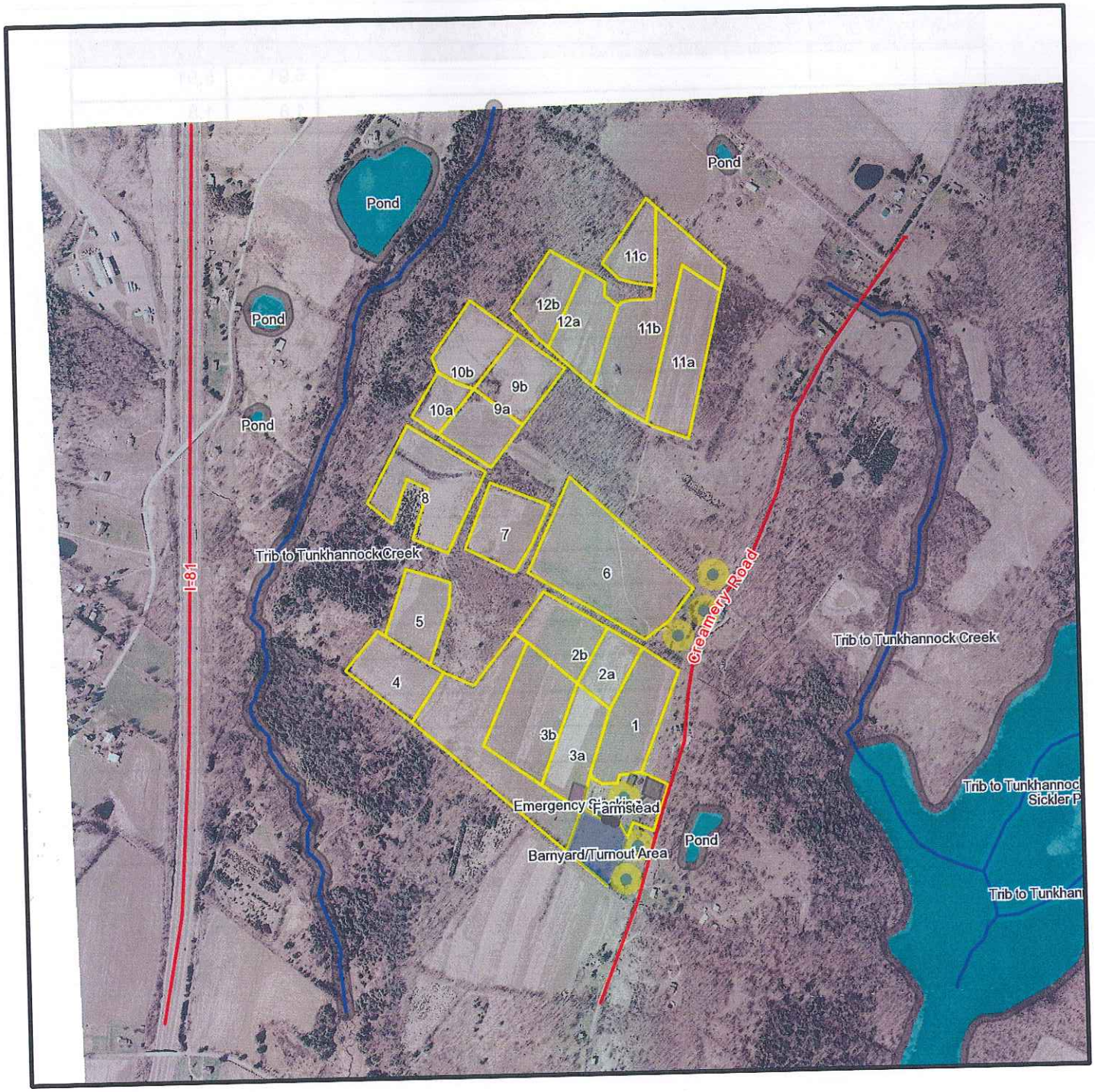
Summarize in a short paragraph the arrangements proposed for the manure to be exported from the operation. This information is described in more detail in Appendix 8 of this plan.

None

Operator Management Map

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Operator Management Map** is to be included here in the Nutrient Management Plan Summary and must include field identification, acreage and boundaries, manure application setback areas and buffers and associated landscape features (streams and other water bodies, sinkholes and active water wells), location of existing and proposed structural BMPs (including manure storage facilities), location of existing or proposed emergency manure stacking areas and in-field manure stacking areas, and road names adjacent to and within the operation. All features on the map must be clearly identified and include a legend for setback areas and other features. The Topographic Map and Soils Map must be included in Appendix 9.

Tom Wright-Operation Map



* 910.0 feet per inch

0 455 910 1365 1820 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

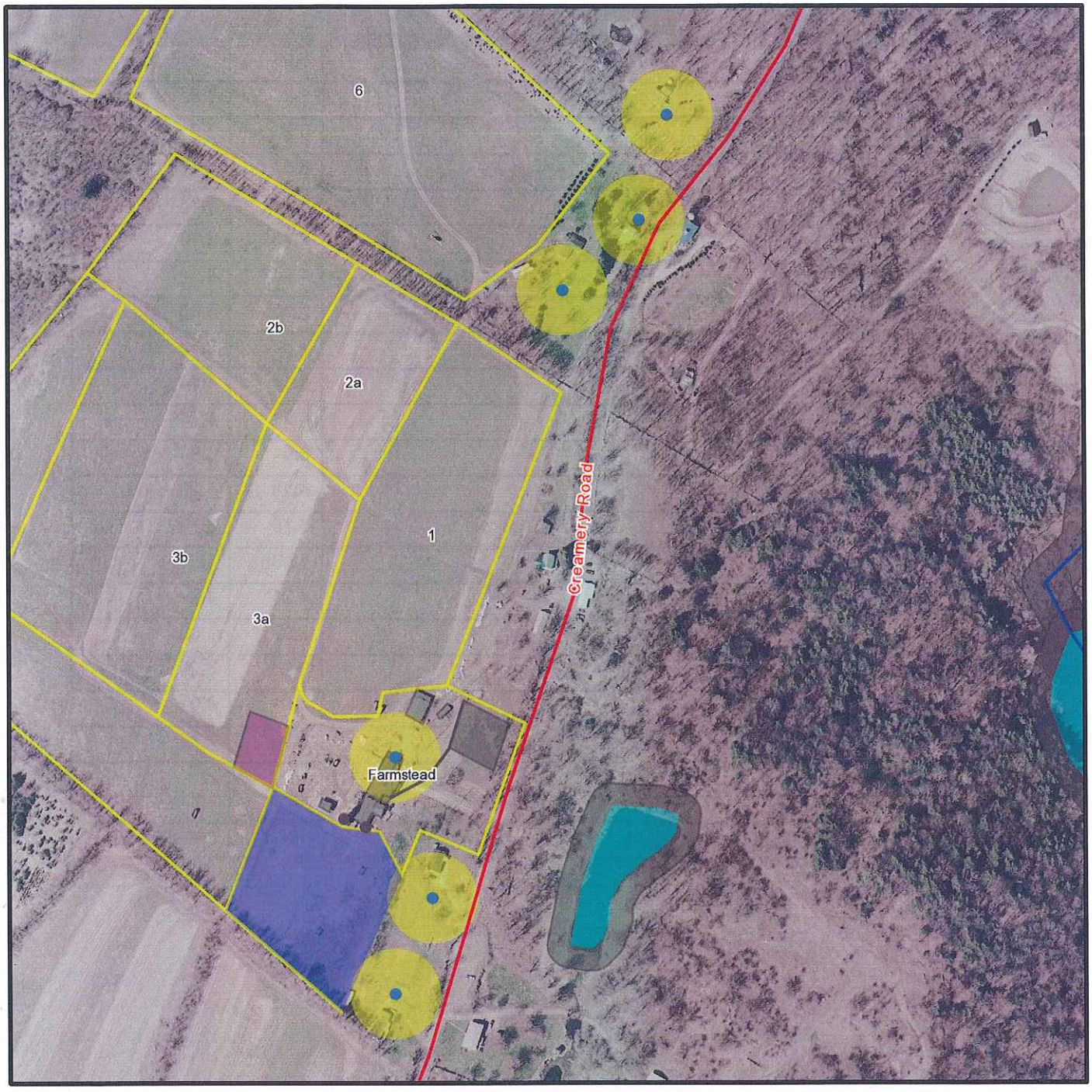
N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 12/23/15

Field Acreages

Field	Label	Description	Acres	Suitable Acres
1	1		5.91	5.91
10a	10a		1.8	1.8
10b	10b		3.91	3.91
11a	11a		6.57	6.57
11b	11b		9.13	9.13
11c	11c		2.73	2.73
12a	12a		4.14	4.14
12b	12b		3.36	3.36
2a	2a		2.58	2.58
2b	2b		4.14	4.14
3a	3a		4.21	4.21
3b	3b		6.84	6.84
4	4		4.28	4.28
5	5		3.76	3.76
6	6		12.38	12.38
7	7		4.21	4.21
8	8		7.02	7.02
9a	9a		3.23	3.23
9b	9b		4.01	4.01
Farmstead	Farmstead		3.35	2.62
Pasture 1			10.14	10.14
		Totals	**107.7**	**106.97**

Tom Wright-Zoomed View (Setbacks)



* 318.0 feet per inch

0 159 318 477 636 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 12/23/15

Field Acreages

Field	Label	Description	Acres	Suitable Acres
1	1		5.91	5.91
10a	10a		1.8	1.8
10b	10b		3.91	3.91
11a	11a		6.57	6.57
11b	11b		9.13	9.13
11c	11c		2.73	2.73
12a	12a		4.14	4.14
12b	12b		3.36	3.36
2a	2a		2.58	2.58
2b	2b		4.14	4.14
3a	3a		4.21	4.21
3b	3b		6.84	6.84
4	4		4.28	4.28
5	5		3.76	3.76
6	6		12.38	12.38
7	7		4.21	4.21
8	8		7.02	7.02
9a	9a		3.23	3.23
9b	9b		4.01	4.01
Farmstead	Farmstead		3.35	2.62
Pasture 1			10.14	10.14
		Totals	**107.7**	**106.97**

Appendix 1

Nutrient Management Plan Agreement & Responsibilities

Plan Implementation Requirements

This nutrient management plan has been developed to meet the requirements of the following programs:

- ☑ Pennsylvania Act 38 of 2005, Select one → ☐ CAO ☑ VAO
- ☐ Pennsylvania CAFO (Concentrated Animal Feeding Operation) program
- ☐ NRCS (Natural Resources Conservation Service) 590 Nutrient Management Standard
- ☐ NRCS CNMP (Comprehensive Nutrient Management Plan)
- ☐ Other program:

Plans developed under these programs are required to be implemented as approved in order to maintain compliance with the specific law or program. Implementation includes adherence to manure and fertilizer application rates, timing, setbacks and conditions; installation of listed BMPs within implementation timeframes; and recordkeeping obligations of the program.

The nutrient management plan has been developed as a: (check one)

- ☑ 1 - Year Plan for crop year 2017 (annual updates will be completed)
- ☐ 3 - Year Plan for crops years

Records required to be maintained include the following:

1) Annual crop yields
2) Manure and fertilizer application rates, locations and date of application
3) Manure production figures for the various manure groups listed in your plan
4) Soil test reports (testing required every 3 years per crop management unit)
5) Manure test reports (testing required once a year for each manure group)
6) Number of animals on pasture, number of days on pasture, and hours per day on pasture
7) For operations exporting manure, Manure Export Sheets
8) BMP designs and certification for new liquid and semi-solid manure storage facilities

The following has been confirmed:

- ☑ Verification of Existing Site Specific Emergency Response Plan
- ☑ Verification that owners of rented/leased lands have been notified that a nutrient management plan has been developed which calls for manure to be applied to their lands and that they have no objections to the plan requirements.
  - ☐ No rented/leased lands

Specialist Signature

I affirm that the information contained in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, based on information provided by the operator. This plan has been developed in accordance with the criteria established for the program(s) indicated above. I affirm that I have discussed the content and implementation of this plan with the operator.

Specialist Signature [signature]

Date 12/4/15

Operator Agreement

I affirm that all information provided in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, and reflects the current and planned activities of the operation. I understand and affirm that I will implement the practices, procedures and record keeping obligations as outlined in this plan in order to protect water quality and address the nutrient needs of the crops associated with the operation. I affirm that if I use a commercial hauler or broker for the application or export of manure, that only haulers or brokers that hold a valid certification issued by the Pa Department of Agriculture, under Act 49 of 2004, will be used.

Operator's Signature [signature]

Date 12/5/15

Operator's Title Operator

Appendix 2

Operation Information

Operation Description

Animal types and numbers; cropland, hayland and pastureland acreage; farmstead acreage; crop rotation (crops, sequence of crops, and number of years for each crop); manure group management, including atypical manure (contributing animal groups, collection, storage and handling procedures); mortality composting management.

The Wright Dairy Farm consists of 110.22 total acres. The farmstead makes up 3.36 acres of the operation. There are 68.17 acres of hay and 26.04 acres of corn silage and 12.65 acres of pasture on the operation. With the establishment of new strips and/or splits within large field areas (denoted with "A" and "B" field numbers), fields on the operation will be maintained as continuous hay or continuous corn with a cover crop to achieve the rotation effect. Farm utilizes hay "strips" downslope of corn ground to control erosion, plants hay and corn crops through no-till or limited tillage, and all corn ground is planted with a post-harvest, no-till cover crop that is utilized as "green manure." The operation is a mixed-breed operation (Jersey and Holstein) with 40 milking cows, 20 heifers, and 10 calves. Manure that is collected is handled as one group since all age classes are housed together in a tie stall facility. Manure is spread every other day or on an as needed basis with no manure storage present on the operation. Loading occurs in lean-to outside of barn where barn cleaner outlets and dumps into spreader. Lime is mixed in with manure in the barn at a rate of 50lb/day to supplement crop needs. Manure is normally spread at an average rate on as many acres as possible and is supplemented with fertilizer. Milking cows are let outside to pasture 18 hours per day (when they are not being milked or fed). Cows receive supplemental feed and water when on pasture with a portable water tank and rotating hay feeders. Heifers and calves remain under roof 24 hours per day. No mortality composting occurs on the operation as mortality is handled through a rendering service. Milkhouse waste water gravity flows from barn to outlet in a vegetated area within the farmstead.

County(s)

Lackawanna

Name of Receiving Stream(s)/Watershed(s)

Tunkhannock Creek

Notation of Special Protection Waters

None

Operation Acres

Total Acres: 110.22

Total Acres Available For Nutrient Application Under Operator's Control

Owned: 0

Rented: 106.86

Names & Addresses of Owners of Rented or Leased Land

Roger & Gloria Miller- 210 Creamery Road, Jermyn, PA 18433
Ralph & Jacki Pruden- 245 Creamery Road, Jermyn, PA 18433

Animal Equivalent Units: 61.15

Animal Equivalent Units Per Acre: 0.57

Existing Manure Storages & Capacity

Type of storage, dimensions, useable capacity, freeboard, top or bottom loaded, dimensions and description of contributing runoff area, description of wastewater additions, types and amounts of bedding. Briefly describe, for each manure group, manure storage management during removal (degree of agitation, method of manure removal, extent the storage is emptied, type of unremoved manure, etc.) and manure sampling procedures. If additional space is needed, make a note and include the required information in Appendix 10.

N/A

Manure Application Equipment Capacity & Practical Application Rates

Description of application equipment, practical application rates based on calibration and calibration method used, the data recorded during equipment calibration is to be retained on the farm.

Gehl 1309 Scavenger spreader (5.5 ton capacity) w/John Deere 2550 Tractor. Calibrated using covered area method for solid manure. Calibrated rates are as follows for 2nd gear, high range, 1200-1300 rpm:
3 inch open- 8 ton/ac, 5 inch open- 14 ton/ac, 8 inch open- 30 ton/ac

Appendix 3
Manure Group Information

When entering manure group information for the first time, select "Calculated or Records" button.

Manure Group Identification	Dairy-Fall		Dairy-Winter		Dairy-Spring		Dairy-Summer	
Manure Report Date (note if averaging several reports)	August 10, 2015		August 10, 2015		August 10, 2015		August 10, 2015	
Laboratory Name	Agri Analysis INC		Agri Analysis INC		Agri Analysis INC		Agri Analysis INC	
Manure Type	Dairy		Dairy		Dairy		Dairy	
Manure Unit (lbs/ton or 1000 gal)	lb/ton		lb/ton		lb/ton		lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	7.1		7.1		7.1		7.1	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	1.1		1.1		1.1		1.1	
Total Organic N (lbs/ton or 1000 gal)	5.9		5.9		5.9		5.9	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	5.4		5.4		5.4		5.4	
Total Potash (K_2O) (lbs/ton or 1000 gal)	2.6		2.6		2.6		2.6	
Percent Solids	13.80		13.80		13.80		13.80	
PSC Value (Enter analytical or book value)	0.38		0.38		0.38		0.38	
Inventory Method	Calculated		Calculated		Calculated		Calculated	
	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.
Manure Group Identification	Dairy-Fall	Dairy-Fall - uncollected	Dairy-Winter		Dairy-Spring	Dairy-Spring - uncollected	Dairy-Summer	Dairy-Summer - uncollected
Description: Site & Season Applied	Dairy barn, Fall		Dairy barn, Winter		Dairy barn, Spring		Dairy barn, Summer	
CALCULATED: Total Manure Collected Per Manure Group	196	82	278		196	82	113	165
Unit	Tons	Tons	Tons		Tons	Tons	Tons	Tons
RECORDS: Total Manure Collected Per Manure Group								
Unit								
	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected
Manure Used On-Farm	216	82	283		194	82	158	165
Units	Tons	Tons	Tons		Tons	Tons	Tons	Tons
Manure Allocation Balance	-20	0	-5		2	0	-43	0
Units	Tons	Tons	Tons		Tons	Tons	Tons	Tons
Manure Exported	0							
Units	Tons							
Total Rainfall and Runoff	0		0		0		0	

	Manure Generation per Animal Group *	Uncollected Manure Nutrient Analysis Book Values	Manure Generation per Animal Group *	Uncollected Manure Nutrient Analysis Book Values	Manure Generation per Animal Group *	Uncollected Manure Nutrient Analysis Book Values	Manure Generation per Animal Group *	Uncollected Manure Nutrient Analysis Book Values
Animal Group 1	Dairy-Cow Fall	Dairy-Cow Fall - uncollected	Dairy-Cow Winter		Dairy-Cow Spring	Dairy-Cow Spring - uncollected	Dairy-Cow Summer	Dairy-Cow Summer - uncollected
Animal Type	Dairy:Lact. Cows, solid	Total Nitrogen (N) (lbs/ton or 1000 gal)	Dairy:Lact. Cows, solid		Dairy:Lact. Cows, solid	Total Nitrogen (N) (lbs/ton or 1000 gal)	Dairy:Lact. Cows, solid	Total Nitrogen (N) (lbs/ton or 1000 gal)
Animal Number	40	10.00	40		40	10.00	40	10.00
Animal Weight	1100	Total Phosphate (P2O5) (lbs/ton or 1000 gal)	1100		1100	Total Phosphate (P2O5) (lbs/ton or 1000 gal)	1100	Total Phosphate (P2O5) (lbs/ton or 1000 gal)
Animal Group AUs	44.0	4.00	44.0		44.0	4.00	44.0	4.00
Animal Group AEUs	10.85	Total Potash (K2O) (lbs/ton or 1000 gal)	10.85		10.85	Total Potash (K2O) (lbs/ton or 1000 gal)	10.85	Total Potash (K2O) (lbs/ton or 1000 gal)
Daily Manure Production per AU	111	8.00	111		111	8.00	111	8.00
Total Days Manure Produced	90	PSC Value	90		90	PSC Value	90	PSC Value
Total Manure Produced	220	0.80	220		220	0.80	220	0.80
Days On Pasture	45		0		45		90	
Hours Per Day On Pasture	18		18		18		18	
Total Bedding	5		5		5		5	
Total Washwater	0		0		0		0	
CALCULATED - Total Uncollected Manure	82				82		165	
CALCULATED-Total Manure Collected Per Animal Group	142		225		142		60	
Animal Group 2	Dairy-Heifer		Dairy-Heifer		Dairy-Heifer		Dairy-Heifer	
Animal Type	Dairy:Heifer		Dairy:Heifer		Dairy:Heifer		Dairy:Heifer	
Animal Number	20		20		20		20	
Animal Weight	750		750		750		750	
Animal Group AUs	15.0		15.0		15.0		15.0	
Animal Group AEUs	3.70		3.70		3.70		3.70	
Daily Manure Production per AU	60		60		60		60	
Total Days Manure Produced	90		90		90		90	
Total Manure Produced	41		41		41		41	
Days On Pasture	0		0		0		0	
Hours Per Day On Pasture	0		0		0		0	
Total Bedding	2		2		2		2	
Total Washwater	0		0		0		0	
CALCULATED - Total Uncollected Manure								
CALCULATED-Total Manure Collected Per Animal Group	43		43		43		43	

	Manure Generation per Animal Group *	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group *	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group *	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group *	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 3	Dairy-Calf		Dairy-Calf		Dairy-Calf		Dairy-Calf	
Animal Type	Dairy:Calf		Dairy:Calf		Dairy:Calf		Dairy:Calf	
Animal Number	10		10		10		10	
Animal Weight	300		300		300		300	
Animal Group AUs	3.0		3.0		3.0		3.0	
Animal Group AEUs	0.74		0.74		0.74		0.74	
Daily Manure Production per AU	80		80		80		80	
Total Days Manure Produced	90		90		90		90	
Total Manure Produced	11		11		11		11	
Days On Pasture	0		0		0		0	
Hours Per Day On Pasture	0		0		0		0	
Total Bedding	0		0		0		0	
Total Washwater	0		0		0		0	
CALCULATED - Total Uncollected Manure								
CALCULATED-Total Manure Collected Per Animal Group	11		11		11		11	

App. 4: Crop Yrs. 2017 CMU/Field ID	Field 1			Field 2a			Field 2b			Field 3a			Field 3b		
Acres	5.9			2.6			4.1			4.2			6.8		
Soil Test Report Date	November 23, 2015			November 23, 2015			November 23, 2015			November 23, 2015			November 23, 2015		
Laboratory Name	PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	174	139	6.4	152	193	6.4	152	193	6.4	132	153	6.3	132	153	6.3
P Index Part A	No to all Part A ques.			Run P Index Part B			No to all Part A ques.			Run P Index Part B			No to all Part A ques.		
	N-based			Part B			N-based			Part B			N-based		
Crop	Grass hay			Corn Silage			Grass hay			Corn Silage			Grass hay		
Planned Yield	4 ton/A			25 ton/A			4 ton/A			25 ton/A			4 ton/A		
Soil Test Recommendation (lb/Acre)	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
	200	0	120	180	0	0	200	0	0	180	0	80	200	0	80
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P Index Application Method															
Manure History Description	Continuously - Summer Crop			Continuously - Summer Crop			Continuously - Summer Crop			Continuously - Summer Crop			Continuously - Summer Crop		
Residual Manure N (lb/A)	35			35			35			35			35		
Legume History Description Residual Legume N (lb/A)	No Previous Year Legume 0			No Previous Year Legume 0			No Previous Year Legume 0			No Previous Year Legume 0			No Previous Year Legume 0		
Net Nutrients Required (lb/A)	165	0	120	145	0	0	165	0	0	145	0	80	165	0	80
Manure Group	Dairy-Spring			Dairy-Winter			Dairy-Spring			Dairy-Winter			Dairy-Summer		
Application Season Application Management (Incorporation, cover crops, etc.)	Spring		Incorporated after 7 days or none	Winter		For next summer use by corn or annuals-Green manure cover crop	Spring		Incorporated after 7 days or none	Winter		For next summer use by corn or annuals-Green manure cover crop	Spring/Summer 1.2-15		Incorporated after 7 days
Availability Factors	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N
(Total N or NH4-N & Organic N)	0.20			0.40			0.20			0.40				0.10	0.35
P Index Application Method				Surface app. when frozen/snow covered						Surface app. when frozen/snow covered					
N Balanced Manure Rate (ton; gal/A)	117 tons/A			51.4 tons/A			117 tons/A			51.4 tons/A			75.3 tons/A		
P Removal Balance Manure Rate	11.1 tons/A			23.2 tons/A			11.1 tons/A			23.2 tons/A			11.1 tons/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A)		60.0	Crop P Removal (lb/A)		125.0	Crop P Removal (lb/A)		60.0	Crop P Removal (lb/A)		125.0	Crop P Removal (lb/A)		60.0
P Index Value				26						23					
Planned Manure Rate (ton or gal/A)	14		ton/A	14		ton/A	14		ton/A	14		ton/A	14		ton/A
Nutrient Balance after Manure	145	-76	84	105	-76	-36	145	-76	-36	105	-76	44	134	-76	44
Supplemental Fertilizer (lb/A)	145	0	84	105	0	0	145	0	0	105	0	44	134	0	44
P Index Application Method															
Final Nutrient Balance (lb/A)	0	-76	0	0	-76	-36	0	-76	-36	0	-76	0	0	-76	0
Manure Utilized on CMU	83 tons			36 tons			58 tons			59 tons			96 tons		

App. 4: Crop Yrs. 2017 CMU/Field ID	Field 4			Field 5			Field 6			Field 7			Field 8		
Acres	4.3			3.8			12.4			4.2			7.0		
Soil Test Report Date	November 23, 2015			November 23, 2015			November 23, 2015			November 23, 2015			November 23, 2015		
Laboratory Name	PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
	65	93	6.4	78	117	6.2	84	91	6.2	41	87	6.3	38	171	5.9
P Index Part A	No to all Part A ques.			No to all Part A ques.			No to all Part A ques.			No to all Part A ques.			No to all Part A ques.		
	N-based			N-based			N-based			N-based			N-based		
Crop	Grass hay			Grass hay			Grass hay			Grass hay			Grass hay		
Planned Yield	4 ton/A			4 ton/A			4 ton/A			4 ton/A			4 ton/A		
Soil Test Recommendation (lb/Acre)	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
	200	0	200	200	0	160	200	0	200	200	20	210	200	30	40
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P Index Application Method															
Manure History Description	Frequently - Summer Crop			Frequently - Summer Crop			Frequently - Summer Crop			Frequently - Summer Crop			Rarely - Summer Crop		
Residual Manure N (lb/A)	20			20			20			20			0		
Legume History Description Residual Legume N (lb/A)	No Previous Year Legume 0			No Previous Year Legume 0			No Previous Year Legume 0			No Previous Year Legume 0			No Previous Year Legume 0		
Net Nutrients Required (lb/A)	180	0	200	180	0	160	180	0	200	180	20	210	200	30	40
Manure Group	Dairy-Summer			Dairy-Spring			Select a Manure Group			Dairy-Fall			Select a Manure Group		
Application Season Application Management (Incorporation, cover crops, etc.)	Summer		Incorporated after 7 days or none	Spring		Incorporated after 7 days or none	Select Manure Application Timing		Select Manure Application Method	Early Fall		Spring use by winter crops or grass hay > Incorporated after 7 days or none	Select Manure Application Timing		Select Manure Application Method
Availability Factors (Total N or NH4-N & Organic N)	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N
	0.20			0.20						0.20					
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	127.7 tons/A			127.7 tons/A						127.7 tons/A					
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	11.1 tons/A			11.1 tons/A						11.1 tons/A					
	Crop P Removal (lb/A)		60.0	Crop P Removal (lb/A)		60.0				Crop P Removal (lb/A)		60.0			
P Index Value															
Planned Manure Rate (ton or gal/A)	14		ton/A	14		ton/A				14		ton/A			
Nutrient Balance after Manure	160	-76	164	160	-76	124	180	0	200	160	-56	174	200	30	40
Supplemental Fertilizer (lb/A)	160	0	164	160	0	124	180	0	200	160	0	174	200	30	40
P Index Application Method															
Final Nutrient Balance (lb/A)	0	-76	0	0	-76	0	0	0	0	0	-56	0	0	0	0
Manure Utilized on CMU	60 tons			53 tons			0			59 tons			0		

Wright-Soils

* 910.0 feet per inch

0 455 910 1365 1820 feet

N

Soil Acreages By Field

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
1	1	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	1.46	Well drained	Farmland of statewide importance	3	0.37
1	1	OcC	Oquaga channery loam, 8 to 15 percent slopes	Oquaga	85	0.26	Well drained	Farmland of statewide importance	3	0.37
1	1	OcD	Oquaga channery loam, 15 to 25 percent slopes	Oquaga	90	0.16	Well drained	Not prime farmland	3	0.37
1	1	WcB	Wellsboro channery loam, 3 to 8 percent slopes	Wellsboro	80	4.03	Moderately well drained	All areas are prime farmland	3	0.32
10a	10a	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	1.53	Somewhat poorly drained	Farmland of statewide importance	3	0.32
10a	10a	WgD	Wellsboro extremely stony loam, 8 to 25 percent slopes	Wellsboro	85	0.26	Moderately well drained	Not prime farmland	3	0.32
10a	10a	WkB	Wurtsboro channery loam, 3 to 8 percent slopes	Wurtsboro	85	0.02	Moderately well drained	All areas are prime farmland	3	0.32
10b	10b	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	1.52	Somewhat poorly drained	Farmland of statewide importance	3	0.32
10b	10b	NcA	Norwich and Chippewa channery silt loams, 0 to 3 percent slopes	Norwich	50	0.04	Very poorly drained	Not prime farmland	3	0.32
10b	10b	NcA	Norwich and Chippewa channery silt loams, 0 to 3 percent slopes	Chippewa	45	0.04	Very poorly drained	Not prime farmland	3	0.28
10b	10b	NxB	Norwich and Chippewa extremely stony silt loams, 0 to 8 percent slopes	Norwich	50	0.05	Very poorly drained	Not prime farmland	3	0.32

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
10b	10b	NxB	Norwich and Chippewa extremely stony silt loams, 0 to 8 percent slopes	Chippewa	45	0.05	Very poorly drained	Not prime farmland	3	0.28
10b	10b	OcC	Oquaga channery loam, 8 to 15 percent slopes	Oquaga	85	0.12	Well drained	Farmland of statewide importance	3	0.37
10b	10b	WkB	Wurtsboro channery loam, 3 to 8 percent slopes	Wurtsboro	85	2.09	Moderately well drained	All areas are prime farmland	3	0.32
11a	11a	AsD	Arnot-Rock outcrop complex, 8 to 25 percent slopes	Arnot	45	0.2	Somewhat excessively drained	Not prime farmland	2	0.28
11a	11a	MxD	Morris extremely stony loam, 8 to 25 percent slopes	Morris	80	0.04	Somewhat poorly drained	Not prime farmland	3	0.32
11a	11a	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	4.51	Well drained	Farmland of statewide importance	3	0.37
11a	11a	OfC	Oquaga flaggy loam, 8 to 15 percent slopes	Oquaga	85	1.82	Well drained	Farmland of statewide importance	3	0.37
11b	11b	MsB	Morris flaggy loam, 3 to 8 percent slopes	Morris	75	0.05	Somewhat poorly drained	Farmland of statewide importance	3	0.32
11b	11b	MxD	Morris extremely stony loam, 8 to 25 percent slopes	Morris	80	0.88	Somewhat poorly drained	Not prime farmland	3	0.32
11b	11b	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	8.21	Well drained	Farmland of statewide importance	3	0.37
11c	11c	MsB	Morris flaggy loam, 3 to 8 percent slopes	Morris	75	0.46	Somewhat poorly drained	Farmland of statewide importance	3	0.32
11c	11c	MxB	Morris extremely stony loam, 0 to 8 percent slopes	Morris	75	0.04	Somewhat poorly drained	Not prime farmland	3	0.32

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
11c	11c	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	2.23	Well drained	Farmland of statewide importance	3	0.37
12a	12a	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	0.47	Somewhat poorly drained	Farmland of statewide importance	3	0.32
12a	12a	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	3.66	Well drained	Farmland of statewide importance	3	0.37
12b	12b	MxD	Morris extremely stony loam, 8 to 25 percent slopes	Morris	80	0.01	Somewhat poorly drained	Not prime farmland	3	0.32
12b	12b	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	0.5	Well drained	Farmland of statewide importance	3	0.37
12b	12b	OcC	Oquaga channery loam, 8 to 15 percent slopes	Oquaga	85	2.85	Well drained	Farmland of statewide importance	3	0.37
12b	12b	WkB	Wurtsboro channery loam, 3 to 8 percent slopes	Wurtsboro	85	< 0.01	Moderately well drained	All areas are prime farmland	3	0.32
2a	2a	LaC	Lackawanna channery loam, 8 to 15 percent slopes	Lackawanna	90	0.01	Well drained	Farmland of statewide importance	3	0.32
2a	2a	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	2.56	Well drained	Farmland of statewide importance	3	0.37
2b	2b	LaC	Lackawanna channery loam, 8 to 15 percent slopes	Lackawanna	90	0.44	Well drained	Farmland of statewide importance	3	0.32
2b	2b	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	1.6	Well drained	Farmland of statewide importance	3	0.37
2b	2b	WcC	Wellsboro channery loam, 8 to 15 percent slopes	Wellsboro	85	1.72	Moderately well drained	Farmland of statewide importance	3	0.32

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
2b	2b	WgD	Wellsboro extremely stony loam, 8 to 25 percent slopes	Wellsboro	85	0.37	Moderately well drained	Not prime farmland	3	0.32
3a	3a	LaC	Lackawanna channery loam, 8 to 15 percent slopes	Lackawanna	90	0.55	Well drained	Farmland of statewide importance	3	0.32
3a	3a	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	3.4	Well drained	Farmland of statewide importance	3	0.37
3a	3a	WcB	Wellsboro channery loam, 3 to 8 percent slopes	Wellsboro	80	0.26	Moderately well drained	All areas are prime farmland	3	0.32
3b	3b	LaC	Lackawanna channery loam, 8 to 15 percent slopes	Lackawanna	90	4.7	Well drained	Farmland of statewide importance	3	0.32
3b	3b	LaD	Lackawanna channery loam, 15 to 25 percent slopes	Lackawanna	85	1.87	Well drained	Not prime farmland	3	0.32
3b	3b	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	< 0.01	Well drained	Farmland of statewide importance	3	0.37
3b	3b	WcC	Wellsboro channery loam, 8 to 15 percent slopes	Wellsboro	85	0.26	Moderately well drained	Farmland of statewide importance	3	0.32
4	4	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	0.8	Somewhat poorly drained	Farmland of statewide importance	3	0.32
4	4	MsB	Morris flaggy loam, 3 to 8 percent slopes	Morris	75	0.01	Somewhat poorly drained	Farmland of statewide importance	3	0.32
4	4	MxB	Morris extremely stony loam, 0 to 8 percent slopes	Morris	75	0.6	Somewhat poorly drained	Not prime farmland	3	0.32
4	4	WcB	Wellsboro channery loam, 3 to 8 percent slopes	Wellsboro	80	2.86	Moderately well drained	All areas are prime farmland	3	0.32

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
5	5	MsB	Morris flaggy loam, 3 to 8 percent slopes	Morris	75	2.81	Somewhat poorly drained	Farmland of statewide importance	3	0.32
5	5	WcB	Wellsboro channery loam, 3 to 8 percent slopes	Wellsboro	80	0.91	Moderately well drained	All areas are prime farmland	3	0.32
5	5	WyB	Wyoming gravelly sandy loam, 3 to 8 percent slopes	Wyoming	90	0.05	Somewhat excessively drained	Farmland of statewide importance	3	0.2
6	6	ArC	Arnot very channery silt loam, very rocky, 3 to 15 percent slopes	Arnot	90	6.23	Somewhat excessively drained	Not prime farmland	2	0.28
6	6	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	2.36	Well drained	Farmland of statewide importance	3	0.37
6	6	WcC	Wellsboro channery loam, 8 to 15 percent slopes	Wellsboro	85	3.79	Moderately well drained	Farmland of statewide importance	3	0.32
7	7	ArC	Arnot very channery silt loam, very rocky, 3 to 15 percent slopes	Arnot	90	0.1	Somewhat excessively drained	Not prime farmland	2	0.28
7	7	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	2.77	Somewhat poorly drained	Farmland of statewide importance	3	0.32
7	7	MsB	Morris flaggy loam, 3 to 8 percent slopes	Morris	75	0.21	Somewhat poorly drained	Farmland of statewide importance	3	0.32
7	7	WcC	Wellsboro channery loam, 8 to 15 percent slopes	Wellsboro	85	1.14	Moderately well drained	Farmland of statewide importance	3	0.32
8	8	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	3.34	Somewhat poorly drained	Farmland of statewide importance	3	0.32
8	8	MsB	Morris flaggy loam, 3 to 8 percent slopes	Morris	75	0.8	Somewhat poorly drained	Farmland of statewide importance	3	0.32

App. 4: Crop Yrs. 2017 CMU/Field ID	Field 9a			Field 9b			Field 10a			Field 10b			Field 11a		
Acres	3.2			4.0			1.8			3.9			6.6		
Soil Test Report Date	November 23, 2015			November 23, 2015			November 23, 2015			November 23, 2015			November 23, 2015		
Laboratory Name	PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	31	149	6.1	31	149	6.1	48	148	6.2	48	148	6.2	57	170	6.1
P Index Part A	No to all Part A ques.			No to all Part A ques.			No to all Part A ques.			No to all Part A ques.			Run P Index Part B		
	N-based			N-based			N-based			N-based			Part B		
Crop	Grass hay			Corn Silage			Corn Silage			Grass hay			Corn Silage		
Planned Yield	4 ton/A			25 ton/A			25 ton/A			4 ton/A			25 ton/A		
Soil Test Recommendation (lb/Acre)	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
	200	50	100	180	80	100	180	0	100	200	0	100	180	0	60
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P Index Application Method															
Manure History Description	Frequently - Summer Crop			Frequently - Summer Crop			Frequently - Summer Crop			Frequently - Summer Crop			Frequently - Summer Crop		
Residual Manure N (lb/A)	20			20			20			20			20		
Legume History Description Residual Legume N (lb/A)	No Previous Year Legume	0		No Previous Year Legume	0		No Previous Year Legume	0		No Previous Year Legume	0		No Previous Year Legume	0	
Net Nutrients Required (lb/A)	180	50	100	160	80	100	160	0	100	180	0	100	160	0	60
Manure Group	Dairy-Fall			Dairy-Fall			Dairy-Fall			Dairy-Fall			Dairy-Winter		
Application Season Application Management (Incorporation, cover crops, etc.)	Early Fall		Spring use by winter crops or grass hay > Incorporated after 7 days or none	Late Fall		For next summer use by corn or annuals-Green manure cover crop	Late Fall		For next summer use by corn or annuals-Green manure cover crop	Late Fall		Spring use by grass or small grains	Winter		For next summer use by corn or annuals-Green manure cover crop
Availability Factors	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N
(Total N or NH4-N & Organic N)	0.20			0.40			0.40			0.40			0.40		
P Index Application Method													Surface app. when frozen/snow covered		
N Balanced Manure Rate (ton; gal/A)	127.7 tons/A			56.7 tons/A			56.7 tons/A			63.8 tons/A			56.7 tons/A		
P Removal Balance Manure Rate	11.1 tons/A			23.2 tons/A			23.2 tons/A			11.1 tons/A			23.2 tons/A		
(ton or gal/A, If required by P Index)	Crop P Removal (lb/A)		60.0	Crop P Removal (lb/A)		125.0	Crop P Removal (lb/A)		125.0	Crop P Removal (lb/A)		60.0	Crop P Removal (lb/A)		125.0
P Index Value													17		
Planned Manure Rate (ton or gal/A)	14		ton/A	14		ton/A	14		ton/A	8		ton/A	14		ton/A
Nutrient Balance after Manure	160	-26	64	120	4	64	120	-76	64	157	-43	79	120	-76	24
Supplemental Fertilizer (lb/A)	160	0	64	120	4	64	120	0	64	157	0	79	120	0	24
P Index Application Method															
Final Nutrient Balance (lb/A)	0	**-26**	0	0	0	0	0	**-76**	0	0	**-43**	0	**0**	**-76**	**0**
Manure Utilized on CMU	45 tons			56 tons			25 tons			31 tons			92 tons		

App. 4: Crop Yrs. 2017 CMU/Field ID	Field 11b			Field 11c			Field 12a			Field 12b			Pasture 1		
Acres	9.1			2.7			4.1			4.2			12.7		
Soil Test Report Date	November 23, 2015			November 23, 2015			November 23, 2015			November 23, 2015			November 23, 2015		
Laboratory Name	PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL			PSU-AASL		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
	57	170	6.1	57	170	6.1	58	174	6.1	58	174	6.1	159	318	6.3
P Index Part A	No to all Part A ques.			Run P Index Part B			Run P Index Part B			No to all Part A ques.			No to all Part A ques		
	N-based			Part B			Part B			N-based			N-based		
Crop	Grass hay			Corn Silage			Corn Silage			Grass hay			Pasture		
Planned Yield	4 ton/A			25 ton/A			25 ton/A			4 ton/A			3 ton/A		
Soil Test Recommendation (lb/Acre)	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
	200	0	60	180	0	60	180	0	40	200	0	40	150	0	0
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P Index Application Method															
Manure History Description	Frequently - Summer Crop			Frequently - Summer Crop			Frequently - Summer Crop			Frequently - Summer Crop			Continuously - Summer Crop		
Residual Manure N (lb/A)	20			20			20			20			35		
Legume History Description Residual Legume N (lb/A)	No Previous Year Legume 0			No Previous Year Legume 0			No Previous Year Legume 0			No Previous Year Legume 0			No Previous Year Legume 0		
Net Nutrients Required (lb/A)	180	0	60	180	0	60	160	0	40	180	0	40	115	0	0
Manure Group	Select a Manure Group			Dairy-Winter			Dairy-Winter			Select a Manure Group			Dairy-Cow Fall - uncollected		
Application Season Application Management (Incorporation, cover crops, etc.)	Select Manure Application Timing		Select Manure Application Method	Winter		For next summer use by corn or annuals-Green manure cover crop	Winter		For next summer use by corn or annuals-Green manure cover crop	Select Manure Application Timing		Select Manure Application Method	Grazing		Grazing anytime with nutrient uptake during growing season
Availability Factors (Total N or NH4-N & Organic N)	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N	Total N	NH4-N	Org. N
				0.40			0.40						0.20		
P Index Application Method				Surface app. when frozen/snow covered			Surface app. when frozen/snow covered								
N Balanced Manure Rate (ton; gal/A)				56.7 tons/A			56.7 tons/A						57.5 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)				23.2 tons/A			23.2 tons/A						11.3 tons/A		
				Crop P Removal (lb/A)		125.0	Crop P Removal (lb/A)		125.0				Crop P Removal (lb/A)		45.0
P Index Value				16			18								
Planned Manure Rate (ton or gal/A)				14		ton/A	14		ton/A				6.46		ton/A
Nutrient Balance after Manure	180	0	60	120	-76	24	120	-76	4	180	0	40	102	-26	-52
Supplemental Fertilizer (lb/A)	180	0	60	120	0	24	120	0	4	180	0	40			
P Index Application Method															
Final Nutrient Balance (lb/A)	0	0	0	0	-76	0	0	-76	0	0	0	0	102	-26	-52
Manure Utilized on CMU	0			38 tons			58 tons			0			82 tons		

App. 4: Crop Yrs. 2017 CMU/Field ID	Pasture 1-2			Pasture 1-3		
Acres	12.7			12.7		
Soil Test Report Date	November 23, 2015			November 23, 2015		
Laboratory Name	PSU-AASL			PSU-AASL		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P 159	ppm K 318	pH 6.3	ppm P 159	ppm K 318	pH 6.3
P Index Part A	No to all Part A ques. N-based			No to all Part A ques. N-based		
Crop	Pasture			Pasture		
Planned Yield	3 ton/A			3 ton/A		
Soil Test Recommendation (lb/Acre)	N	P2O5	K2O	N	P2O5	K2O
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)						
P Index Application Method						
Manure History Description						
Residual Manure N (lb/A)						
Legume History Description Residual Legume N (lb/A)						
Net Nutrients Required (lb/A)	102	-26	-52	89	-52	-104
Manure Group	Dairy-Cow Spring - uncollected			Dairy-Cow Summer - uncollected		
Application Season Application Management (Incorporation, cover crops, etc.)	Grazing		Grazing anytime with nutrient uptake during growing season	Grazing		Grazing anytime with nutrient uptake during growing season
Availability Factors (Total N or NH4-N & Organic N)	Total N 0.20	NH4-N	Org. N	Total N 0.20	NH4-N	Org. N
P Index Application Method						
N Balanced Manure Rate (ton; gal/A)	51 tons/A			44.5 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	4.8 tons/A Crop P Removal (lb/A)		19.0	0 tons/A Crop P Removal (lb/A)		0.0
P Index Value						
Planned Manure Rate (ton or gal/A)	6.46		ton/A	13.01		ton/A
Nutrient Balance after Manure	89	-52	-104	63	-104	-208
Supplemental Fertilizer (lb/A)				0	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)				63	-104	-208
Manure Utilized on CMU	82 tons			165 tons		
	Multiple Application			Multiple Application		

Appendix 5

Phosphorus Index

The current Pennsylvania Phosphorus Index Spreadsheet for each field from Appendix 4 that required Part B of the P Index must be included here.

Appendix 5 - P Index

Crop Yrs. 2017

Pennsylvania P Index Version 2

Go to Appendix 4

Go to NMP Index

Go to Appendix 6

PART A: SCREENING TOOL

	CMU/Field ID	Field 2a
Is the CMU in a Special Protection watershed?	If the answer is Yes to any of these questions, Part B must be used.	No
Is there a significant farm management change as defined by Act 38? (see below)		No
Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)		152
Is the Contributing Distance from this CMU to receiving water less than 150 ft.?		No

The following Act 38 criteria determine when there is a significant farm management change:

1. net increase of greater than 10% in AEUs per acre
2. a change in crop management that results in a farmwide reduction of greater than 20% in nitrogen necessary for realistic expe
3. alternative organic sources will replace all or some of the nutrient sources listed in the plan
4. additional lands are brought into the operation (purchased or rented)

PART B: SOURCE FACTORS

					CMU/Field ID	Field 2a
SOIL TEST	Mehlich 3 Soil Test P (ppm P)					152
					Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	30
FERTILIZER P RATE					Fertilizer P (lb P2O5/acre)	0
FERTILIZER APPLICATION METHOD	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	None,None
					Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method	0
MANURE P RATE					Manure P (lb P2O5/acre)	76
MANURE APPLICATION METHOD	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	1
P SOURCE COEFFICIENT	Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1					0.38
					Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient	29
					Source Factor Sum	59

PART B: TRANSPORT FACTORS

					CMU/Field ID	Field 2a
EROSION	Soil Loss (ton/acre/yr)					1.26
RUNOFF POTENTIAL	0 *Drainage Class is* Excessively	2 *Drainage Class is* Somewhat Excessively	4 *Drainage Class is* Well/Moderately Well	6 *Drainage Class is* Somewhat Poorly	8 *Drainage Class is* Poorly/Very Poorly	4
SUBSURFACE DRAINAGE	0 None		1 Random		2 * Patterned	0
CONTRIBUTING DISTANCE	0 > 500 ft.	2 350 to 500 ft.	4 200 to 349 ft.	6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer	9 ‡ < 100 ft.	0
					Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance	5
MODIFIED CONNECTIVITY	0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT		1.0 Grassed Waterway or None		1.1 Direct Connection APPLIES TO DIST > 100 FT	1.0
					Transport Sum x Modified Connectivity / 24	0.22
					P Index Value = 2 x Source x Transport	26

* OR rapidly permeable soil near a stream

‡ "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

	A	H	I	J	K
1	**Appendix 5 - P Index**				
2	Crop Yrs. 2017				
3	Pennsylvania P Index Version 2	**Field 3a**	**Field 11a**	**Field 11c**	**Field 12a**
4	Go to Appendix 4	**No**	**No**	**No**	**No**
5	Go to NMP Index	**No**	**No**	**No**	**No**
6	Go to Appendix 6	132	57	57	58
7		**No**	**No**	**No**	**No**
8					
9					
10		cted crop yields			
11					
12					
13	**PART B: SOURCE FACTORS**	**Field 3a**	**Field 11a**	**Field 11c**	**Field 12a**
14	SOIL TEST	132	57	57	58
15		26	11	11	12
16	FERTILIZER P RATE	0	0	0	0
17	FERTILIZER APPLICATION METHOD	None,None	None,None	None,None	None,None
18		0	0	0	0
19	MANURE P RATE	76	76	76	76
20	MANURE APPLICATION METHOD	1	1	1	1
21	P SOURCE COEFFICIENT	0.38	0.38	0.38	0.38
22		29	29	29	29
23		55	40	40	40
24	**PART B: TRANSPORT FACTORS**	**Field 3a**	**Field 11a**	**Field 11c**	**Field 12a**
25	EROSION	0.92	1.03	0.65	1.36
26	RUNOFF POTENTIAL	4	4	4	4
27	SUBSURFACE DRAINAGE	0	0	0	0
28	CONTRIBUTING DISTANCE	0	0	0	0
29		5	5	5	5
30	MODIFIED CONNECTIVITY	1.0	1.0	1.0	1.0
31	* OR rapidly permeable soil near a strea	0.21	0.21	0.19	0.22
32	‡ "9" factor does not apply to fields recei	**23**	**17**	**16**	**18**

Appendix 6

Manure Management

Date of Site Evaluation

August 7, 2015

Statement Documenting Areas Evaluated During Site Evaluation

Sites evauluated during manure management visit were manure loading area, milkhouse waste outlet, turnout area outside of barn, watering/feeding areas in pasture.

Identification of Inadequate Manure Management Practices and Conditions

Turnout area was heavily denuded and there was some manure buildup around supplemental feeding/watering locations. Milkhouse waste water was untreated and gravity flowed to a vegetated area within the farmstead. Barn's perimeter drain outlets in manure loading area.

BMPs to Address Manure Management Problem Areas

The turnout area as well as areas around supplemental feed/water should be managed as a "brown areas" or "heavy use areas" in that excess manure be collected and spread when feasible, downslope areas be managed to maximize cover to reduce/prevent nutrient runoff, and denuded areas be replanted with temporary animal exclusion to ensure adequate vegetated cover. Feeding areas should be rotated as much as is feasible for the operation to minimize damage to particular locations. In addition, it is recommended that the outlet for the barn's perimeter drain be diverted or extended or both as to keep water from running through manure loading area and potentially discharging manure nutrients to surface water. Lastly, a system for the storage, treatment, transport and spreading of milkhouse waste should be installed to properly address resource concern.

Appendix 8

Importer/Broker Agreements & NBSs

Nutrient Balance Sheets are not required for importers that have an approved Nutrient Management Plan.

N/A N/A

Appendix 9

Operation Maps

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Topographic Map and Soils Map** must be included here. The Topographic Map must be drawn to scale and identify the land included in the plan with operation boundaries. The Soils Map must include field identification and boundaries, soils types and slopes with soils legend. Adding P Index lines can be helpful on the Topographic or Soils Map, but are not required. The Operator Management Map must be included in the Nutrient Management Plan Summary.

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
8	8	WgD	Wellsboro extremely stony loam, 8 to 25 percent slopes	Wellsboro	85	0.52	Moderately well drained	Not prime farmland	3	0.32
8	8	WyB	Wyoming gravelly sandy loam, 3 to 8 percent slopes	Wyoming	90	2.37	Somewhat excessively drained	Farmland of statewide importance	3	0.2
9a	9a	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	3.23	Somewhat poorly drained	Farmland of statewide importance	3	0.32
9a	9a	WkB	Wurtsboro channery loam, 3 to 8 percent slopes	Wurtsboro	85	< 0.01	Moderately well drained	All areas are prime farmland	3	0.32
9b	9b	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	2.49	Somewhat poorly drained	Farmland of statewide importance	3	0.32
9b	9b	OcC	Oquaga channery loam, 8 to 15 percent slopes	Oquaga	85	0.92	Well drained	Farmland of statewide importance	3	0.37
9b	9b	WkB	Wurtsboro channery loam, 3 to 8 percent slopes	Wurtsboro	85	0.6	Moderately well drained	All areas are prime farmland	3	0.32
Farmstead	Farmstead	OcC	Oquaga channery loam, 8 to 15 percent slopes	Oquaga	85	1.5	Well drained	Farmland of statewide importance	3	0.37
Farmstead	Farmstead	OxD	Oquaga extremely stony loam, 8 to 25 percent slopes	Oquaga	85	0.34	Well drained	Not prime farmland	3	0.37
Farmstead	Farmstead	WdB	Wellsboro channery loam, 3 to 8 percent slopes	Wellsboro	80	1.52	Moderately well drained	All areas are prime farmland	3	0.32
Pasture 1	Pasture 1	LaC	Lackawanna channery loam, 8 to 15 percent slopes	Lackawanna	90	1.23	Well drained	Farmland of statewide importance	3	0.32
Pasture 1	Pasture 1	LaD	Lackawanna channery loam, 15 to 25 percent slopes	Lackawanna	85	2.51	Well drained	Not prime farmland	3	0.32

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
Pasture 1	Pasture 1	MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	3.46	Somewhat poorly drained	Farmland of statewide importance	3	0.32
Pasture 1	Pasture 1	MsB	Morris flaggy loam, 3 to 8 percent slopes	Morris	75	0.23	Somewhat poorly drained	Farmland of statewide importance	3	0.32
Pasture 1	Pasture 1	OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	1.03	Well drained	Farmland of statewide importance	3	0.37
Pasture 1	Pasture 1	OcC	Oquaga channery loam, 8 to 15 percent slopes	Oquaga	85	1.15	Well drained	Farmland of statewide importance	3	0.37
Pasture 1	Pasture 1	WcB	Wellsboro channery loam, 3 to 8 percent slopes	Wellsboro	80	2.54	Moderately well drained	All areas are prime farmland	3	0.32
Pasture 1	Pasture 1	WcC	Wellsboro channery loam, 8 to 15 percent slopes	Wellsboro	85	0.12	Moderately well drained	Farmland of statewide importance	3	0.32
Pasture 1	Pasture 1	WgD	Wellsboro extremely stony loam, 8 to 25 percent slopes	Wellsboro	85	0.39	Moderately well drained	Not prime farmland	3	0.32

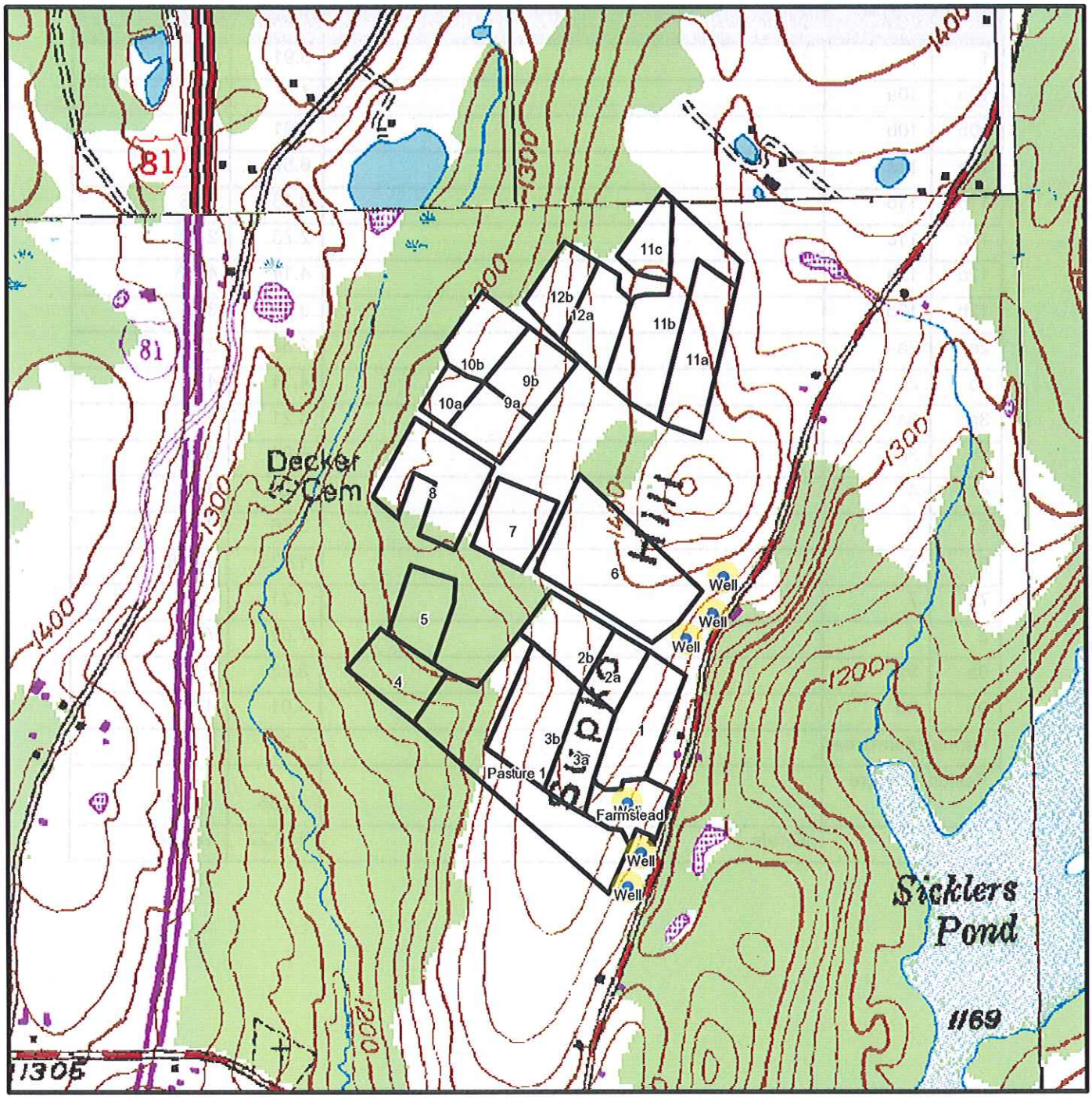
Soil Acreages For Farm

Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
LaC	Lackawanna channery loam, 8 to 15 percent slopes	Lackawanna	90	6.93	Well drained	Farmland of statewide importance	3	0.32
LaD	Lackawanna channery loam, 15 to 25 percent slopes	Lackawanna	85	4.38	Well drained	Not prime farmland	3	0.32
MrB	Morris channery loam, 3 to 8 percent slopes	Morris	75	19.61	Somewhat poorly drained	Farmland of statewide importance	3	0.32

Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
MsB	Morris flaggy loam, 3 to 8 percent slopes	Morris	75	4.57	Somewhat poorly drained	Farmland of statewide importance	3	0.32
OcB	Oquaga channery loam, 3 to 8 percent slopes	Oquaga	85	31.52	Well drained	Farmland of statewide importance	3	0.37
OcC	Oquaga channery loam, 8 to 15 percent slopes	Oquaga	85	6.8	Well drained	Farmland of statewide importance	3	0.37
WcB	Wellsboro channery loam, 3 to 8 percent slopes	Wellsboro	80	12.12	Moderately well drained	All areas are prime farmland	3	0.32
WcC	Wellsboro channery loam, 8 to 15 percent slopes	Wellsboro	85	7.03	Moderately well drained	Farmland of statewide importance	3	0.32
WgD	Wellsboro extremely stony loam, 8 to 25 percent slopes	Wellsboro	85	1.54	Moderately well drained	Not prime farmland	3	0.32
OcD	Oquaga channery loam, 15 to 25 percent slopes	Oquaga	90	0.16	Well drained	Not prime farmland	3	0.37
MxB	Morris extremely stony loam, 0 to 8 percent slopes	Morris	75	0.64	Somewhat poorly drained	Not prime farmland	3	0.32
WyB	Wyoming gravelly sandy loam, 3 to 8 percent slopes	Wyoming	90	2.42	Somewhat excessively drained	Farmland of statewide importance	3	0.2
ArC	Arnot very channery silt loam, very rocky, 3 to 15 percent slopes	Arnot	90	6.33	Somewhat excessively drained	Not prime farmland	2	0.28
NcA	Norwich and Chippewa channery silt loams, 0 to 3 percent slopes	Norwich	50	0.04	Very poorly drained	Not prime farmland	3	0.32
NcA	Norwich and Chippewa channery silt loams, 0 to 3 percent slopes	Chippewa	45	0.04	Very poorly drained	Not prime farmland	3	0.28

Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
NxB	Norwich and Chippewa extremely stony silt loams, 0 to 8 percent slopes	Norwich	50	0.05	Very poorly drained	Not prime farmland	3	0.32
NxB	Norwich and Chippewa extremely stony silt loams, 0 to 8 percent slopes	Chippewa	45	0.05	Very poorly drained	Not prime farmland	3	0.28
WkB	Wurtsboro channery loam, 3 to 8 percent slopes	Wurtsboro	85	2.71	Moderately well drained	All areas are prime farmland	3	0.32
OxD	Oquaga extremely stony loam, 8 to 25 percent slopes	Oquaga	85	0.34	Well drained	Not prime farmland	3	0.37
MxD	Morris extremely stony loam, 8 to 25 percent slopes	Morris	80	0.93	Somewhat poorly drained	Not prime farmland	3	0.32
AsD	Arnot-Rock outcrop complex, 8 to 25 percent slopes	Arnot	45	0.2	Somewhat excessively drained	Not prime farmland	2	0.28
OfC	Oquaga flaggy loam, 8 to 15 percent slopes	Oquaga	85	1.82	Well drained	Farmland of statewide importance	3	0.37

Wright-Topographic



* 910.0 feet per inch

0 455 910 1365 1820 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 12/08/15

Field Acreages

Field	Label	Description	Acres	Suitable Acres
1	1		5.91	5.91
10a	10a		1.8	1.8
10b	10b		3.91	3.91
11a	11a		6.57	6.57
11b	11b		9.13	9.13
11c	11c		2.73	2.73
12a	12a		4.14	4.14
12b	12b		3.36	3.36
2a	2a		2.58	2.58
2b	2b		4.14	4.14
3a	3a		4.21	4.21
3b	3b		6.84	6.84
4	4		4.28	4.28
5	5		3.76	3.76
6	6		12.38	12.38
7	7		4.21	4.21
8	8		7.02	7.02
9a	9a		3.23	3.23
9b	9b		4.01	4.01
Farmstead	Farmstead		3.36	2.63
Pasture 1	Pasture 1		12.65	12.62
		Totals	**110.22**	**109.46**

Tom Wright-Zoomed View (Proposed BMP's)

* 86.0 feet per inch

0 43 86 129 172 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 12/24/15

Field Acreages

Field	Label	Description	Acres	Suitable Acres
1	1		5.91	5.91
10a	10a		1.8	1.8
10b	10b		3.91	3.91
11a	11a		6.57	6.57
11b	11b		9.13	9.13
11c	11c		2.73	2.73
12a	12a		4.14	4.14
12b	12b		3.36	3.36
2a	2a		2.58	2.58
2b	2b		4.14	4.14
3a	3a		4.21	4.21
3b	3b		6.84	6.84
4	4		4.28	4.28
5	5		3.76	3.76
6	6		12.38	12.38
7	7		4.21	4.21
8	8		7.02	7.02
9a	9a		3.23	3.23
9b	9b		4.01	4.01
Farmstead	Farmstead		3.35	2.62
Pasture 1			10.14	10.14
		Totals	**107.7**	**106.97**

Appendix 10

Supporting Information & Documentation

Includes if applicable the Rainfall Additions Worksheet, Winter Application Matrix, Residual N Calculation Worksheet and other supplemental worksheets included in the NMP Spreadsheet. Attach information and documentation necessary to support plan content not included elsewhere in the NMP Spreadsheet or appendices. Examples include, but are not limited to, documentation of animal weights if Agronomy Facts 54 is not used, bedding calculations, or calculations for irrigation rates.

Items included are:

Bedding calculation
Winter application matrix
Manure spreader calibration calculations
Emergency response plan

*Standard weights for livestock were not used on this operation as it is a mixed-herd dairy. Half of the animals on the operation are Holstein (standard weights 1300, 900, 375) while the other half are Jersey (standard weights 900, 600, 225). The weights used in the plan are an average of the standard weights for each breed (1100, 750, 300).

Bedding Calculation: Wright Farm

-As per farmer, 1 round bale of hay (~800 lbs) is chopped and used for bedding every 5 days for dairy cows, heifers and calves.

800 lbs / 5 days= 160 lbs/day

160 lbs/day x 365 days/year= 58,400 lbs **-Total Bedding**

58,400 lbs total bedding / 2000 lbs/ton = 29.2 tons -**Total Bedding**

Cows- 20 tons

Heifers- 8 tons

Calves- 1 ton

PA Technical Manual Supplement 10: Winter Manure Application Matrix (10/2009)

User Notes for the Winter Manure Application Matrix

1. Under Act 38, any one of the following conditions meets the "winter" definition - see §83.201.
   - December 15 to February 28
   - Frozen ground (4 inch depth)
   - Snow-covered ground
2. All setbacks including those specific to winter manure application must be followed - see §83.294 (f) and (g).
   - No winter manure application within 100 ft. of an above ground agricultural drainage inlet where surface flow is toward the inlet.
   - No winter manure application within 100 ft. of a wetland (identified on National Wetland Inventory Maps) within the 100 year floodplain of an Exceptional Va segment if surface flow is toward the wetland.
3. Fields receiving winter manure applications must have 25% cover or an established cover crop - see §83.294 (g).

To begin for each CMU, 1. Enter the CMU ID and 2. Verify the CMU meets the required cover conditions described in User Note 3.

CMU ID	Field 2a
Does the CMU have 25% cover or an established cover crop?	Yes

To continue for each CMU, 1. Choose the appropriate Evaluation Criteria Description and 2. Enter the corresponding Ranking Value in the last column.

	Evaluation Criteria Descriptions and Ranking Values				
	4	3	2[b]	1[c]	Field 2a
Field Slope	< 4 %	4 - 8%	9 - 15%	> 15%	3
Distance from Water Bodies[a]	> 350 ft.	350 - 200 ft	199 - 100 ft	<100 ft	4
Drainage Class Determined using Phosphorus Index Drainage Class Determination	Somewhat Excessively OR Excessively	Well OR Moderately Well	Somewhat Poorly	Poorly OR Very Poorly	3
Runoff Control	Recommended conservation practices are in place. **Very low potential for concentrated flow.**	Some conservation practices are in place. **Low potential for concentrated flow.**	Some conservation practices are in place. **Moderate potential for concentrated flow.**	No conservation practices are in place. **High potential for concentrated flow.**	3
					13
					Good

[a] Includes Perennial and Intermittent streams with defined bed and bank, Lakes, Ponds, Open sinkholes, and Active private and public water sources.

[b] If a field receives a rating of "2" in any two categories the field is not recommended for winter application regardless of the final field Ranking Value.

[c] If a field receives a rating of "1" in any one category the field is not recommended for winter application regardless of the final field Ranking Value.

Recommended Winter Manure Application Prioritization

Ranking Value	*Ranking Category*	*Recommendation for Winter Manure Spreading Prioritization*
Greater than 12	Good	These fields should receive first priority for winter manure application.
8 to 12	Fair	These fields should receive second priority for winter manure application.
Less than 8	Poor	These fields are not recommended for winter manure application.

Go to NMP Index
Go to Appendix 4

lue stream

Field 3a	Field 11a	Field 11c	Field 12a
Yes	Yes	Yes	Yes

Field 3a	Field 11a	Field 11c	Field 12a
3	3	3	3
4	4	4	4
3	3	3	3
3	3	3	3
13	13	13	13
Good	Good	Good	Good

Manure Spreader Calibration record Sheet—Swath (load-area) Method			
Spreader identification	Gehl Scavenger 1309		
date	Multiple (8/14, 8/26, 8/28)		
1. Determine the capacity of the spreader (use gallons for liquid manure and tons for solid manure).			
a. Spreader capacity	5.5		gallons or (tons)
2. Spread one full load in a rectangular pattern.			
Forward speed, gear, or throttle setting	2nd Gear, High Range		
PTO speed or setting	1200-1300 RPM		
Spreader gate opening setting	3 inch opening		
3. Measure the coverage area.			
	Trial 1	Trial 2	Trial 3
a. Spread area width	50 feet	60 feet	60 feet
b. Spread area length	600 feet	515 feet	525 feet
4. Calculate the area covered.			
a. Spread area (3a x 3b)	30,000 ft²	30,900 ft²	31,500 ft²
b. Spread area (4a ÷ 43,560)	0.69 acres	0.71 acres	0.72 acres
5. Calculate the manure application rate.	7.97 T/A	7.75 T/A	[redacted] 7.64
a. Application rate (1a ÷ 4b)			gallons or (tons/acre)
6. Average each of the calibration trials to determine the final application rate.			
Final calibrated application rate (average of trials in 5a)	7.79		gallons or (tons/acre)

* Rounded to 8 ton/ac for sake of plan

MANURE SPREADER CALIBRATION RECORD SHEET—SWATH (LOAD-AREA) METHOD

SPREADER IDENTIFICATION: Gehl Scavenger 1309

DATE: Multiple (8/7, 8, 10, 8/12)

1. Determine the capacity of the spreader (use gallons for liquid manure and tons for solid manure).

a. Spreader capacity: 5.5 gallons or (tons)

2. Spread one full load in a rectangular pattern.

Forward speed, gear, or throttle setting: 2nd gear, high range

PTO speed or setting: 1200-1300 RPM

Spreader gate opening setting: 5 [redacted] inch opening

3. Measure the coverage area.

	Trial 1	Trial 2	Trial 3
a. Spread area width	60 feet	60 feet	60 feet
b. Spread area length	325 feet	280 feet	295 feet

4. Calculate the area covered.

a. Spread area (3a x 3b)	19,500 ft²	16,800 ft²	17,700 ft²
b. Spread area (4a ÷ 43,560)	0.45 acres	0.39 acres	0.41 acres

5. Calculate the manure application rate.

a. Application rate (1a ÷ 4b)	12.22 T/A	14.10 T/A	13.41 gallons or (tons/acre)

6. Average each of the calibration trials to determine the final application rate.

Final calibrated application rate (average of trials in 5a): 13.24 gallons or (tons/acre)

* Rounded up to 14 T/A to be conservative and for the sake of the plan

MANURE SPREADER CALIBRATION RECORD SHEET—SWATH (LOAD-AREA) METHOD

SPREADER IDENTIFICATION Gehl Scavenger 1309

DATE Multiple (10/23, 10/28, 10/30)

1. Determine the capacity of the spreader (use gallons for liquid manure and tons for solid manure).

a. Spreader capacity 5.5 gallons or (tons)

2. Spread one full load in a rectangular pattern.

Forward speed, gear, or throttle setting 2nd gear, High range

PTO speed or setting 1200-1300 RPM

Spreader gate opening setting 8 inch opening

3. Measure the coverage area.

	Trial 1	Trial 2	Trial 3
a. Spread area width	20 feet	20 feet	20 feet
b. Spread area length	350 feet	375 feet	350 feet

4. Calculate the area covered.

a. Spread area (3a x 3b)	7000 ft²	7500 ft²	7000 ft²
b. Spread area (4a ÷ 43,560)	0.16 acres	0.17 acres	0.16 acres

5. Calculate the manure application rate.

a. Application rate (1a ÷ 4b)	34.38 T/A	32.35 T/A	34.38	gallons or (tons/acre)

6. Average each of the calibration trials to determine the final application rate.

Final calibrated application rate (average of trials in 5a) 33.70 T/A. gallons or tons/acre

* Rounded to 34 T/A for sake of plan

Emergency Response Plan

Developed for: **THOMAS WRIGHT FARM**

If an emergency manure spill or leak should occur you need to take the following actions:

1) Ensure you and other people are safe, if the spill or leak involves a public road:
   a. Contact police for traffic control
      -Greenfield Township Police Department: (570) 267-0098
   b. Use flares, safety cones, etc to warn approaching motorists

2) Stop the leak or spill
   a. If the leak or spill happens while emptying the storage:
      - Stop pumps, close valves, and/or stop siphoning of manure
      - Park on top of flexible piping to pinch it closed
      - If necessary, direct manure to another storage structure
      - Plug holes in the impoundment, build dams to capture the leak and either pump the manure back into storage or spread it on fields
   b. If the leak or spill happens while on the road:
      - Pull off the side of the road
      - Plug the leak or otherwise stop the flow of manure from the tank
      - Build a berm or dike to keep manure from flowing into streams, ditch, etc
      - Call the police to direct traffic
        -Greenfield Township Police Department: (570) 267-0098

3) Contain and control the leak or spill:
   a. Build containment dam to capture the manure. Use soil, gravel, hay bales, etc. Provide an area for the impounded manure to run into and be temporarily stored. Limit the area in contact with the manure. Use a contractor if necessary. Some local contractors or others with equipment in the area are:
      Contractor _____ _____
      Contractor _____ _____
   b. Prevent manure from running into streams, ditches, etc
   c. Use absorbent material to soak up the manure, such as straw, hay, sawdust, animal feed, or soil to limit or stop the flow
   d. Check for contaminated subsurface tile lines and divert flow from tile inlets

4) Notify the proper authorities:

Pa DEP, Emergency Response number:	**877-333-1904**
Lackawanna County Conservation District	**570-382-3086**
PA Fish and Boat Commission:	**570-477-5717**
Your nutrient management planner:	**570-382-3086**

   a. Make a record of details of the spill and actions you took. Take pictures of the extent of the spill and your containment and cleanup practices.
   b. If a spill enters a sinkhole or otherwise has the potential to enter groundwater, notify adjacent landowners who use private wells for their water supply.

5) Clean up the leak or spill:
   a. This may be directed by the authorities listed above.
   b. Pick up absorbent material you used and properly dispose of the material
   c. Restore the damaged area if necessary

Susquehanna County Conservation District
88 Chenango Street
Montrose, PA 18801
(570) 278-4600 Ext. 3050
suscondistrict.org

12/30/2015

Eric H. Johnson
1038 Montdale Road
Suite 109
Scott Township, PA 18447

Re: Nutrient Management Plan Technical Review
Wright Dairy Farm
Greenfield Township, Lackawanna County

Dear Mr. Eric H. Johnson:

The Susquehanna County Conservation District received the initially proposed Nutrient Management Plan for the Wright Dairy Farm operation at 223 Creamery Road, Jermyn, PA 18470 on December 8, 2015. The NMP was deemed administratively complete at that time. I have completed my technical review of the plan and have deemed it in Final Form on December 30, 2015.

This plan will be presented at the SCC's January 12, 2016 meeting for final approval.

If you have any further questions please don't hesitate to contact me at 570-278-4600 ext. 3054 or email at wcongdon@suscondistrict.org. Thank you.

Sincerely,

Wesley Congdon
E&S/Nutrient Management Technician
Susquehanna County Conservation District

cc: Mark Jackson
Conservation Program Specialist 1
State Conservation Commission
2301 North Cameron Street, Rm 311
Harrisburg, PA 17110-9408

Michael Aucoin
Conservation Program Specialist / Cert. Programs
State Conservation Commission
2301 North Cameron Street, Rm. 311
Harrisburg, PA 17110-9408

Michael J. Walker
Nutrient Management Program Coordinator PA Department of Agriculture
State Conservation Commission
542 County Farm Road
Montoursville, PA 17754

Attachment 1

Proposed Building Reserve Account
using SCC Allocated UGW Funds

District Name Susquehanna County Conservation District

Date Board took action on creating this proposed account: 12/17/15
(Please provide a copy of district board minutes)

Name of Proposed Reserve Account: CDEAP/UGWF Building Fund

Purpose/description of account and the overall building project:

Acct created last yr. Additional funds added

Additional funds = $48,662.00

Length of time you expect account to remain active: 2-3 yrs (ex. 1 yr, 2 yr, permanent)

Who owns the property: Susquehanna County Conservation District

If the property is not owned by the District, how long of a lease do you have: N/A

Will the District have a mortgage and how long will it be for after the building is complete: Not sure

Fiscal management policy relating to the account:
How will you document expenditures in the account: Quickbooks - District Audit

Will the board take action on each transaction: Yes

Who will have signature authority on the account: 2 signators - Chair, Treas, Mgr (ex. Manager, chair)

Expected Size of Account: ~ 350,000

Will this account be replenished and if so how: No

Additional Information pertinent to the use of the reserve account:

SUSQUEHANNA CONSERVATION DISTRICT
DRAFT
MEETING MINUTES
December 17th 2015

Start time: 08:36 AM End time:11:07AM

Attendance: Maria Hill, Curt Hepler, Jim Garner, Dan Farnham, Jim Kessler, Brian Severcool, Kathy Blaisure, Shane Kleiner, Ain Welmon, Bill Zick, Lillian Theophanis

Comments from the public – none at this time

Meeting minutes
Jim Kessler motions to accept the minutes with changes Brian seconds - motion passed

Treasures Report –
Dan motions to bind the treasures report over for audit Jim Kessler seconds - motion passed

Correspondence –
Jim Garner reviewed correspondence.
Lillian motions to send a letter to the commissioners regarding the ag committee board after the first of the year Jim Kessler seconds – motion passed
Note – Lillian will help with Jim G. write letter to commissioners

Requests for Assistance & Cancellation- none at this time

Reports:
Agencies:
NRCS reviewed report – noted that Claude Bennett barnyard is now completed noted that
DEP: reviewed report - last training on DGLVR GIS training is the 15th of the week for the new software. There will be the staff conference at state college tentatively the 2nd or 3rd of March
Staff: see attached
Commissioner Director: --
Nominating Organizations:
Forest landowners – had good attendance at their annual banquet last month

Committee Reports:

- Ag Committee – Board requests that the Ag committee have more figures related to income for the work session so this can be voted on in January.
  Bill Zick motions to accept the policy change for rankings of Chesapeake Bay Special Projects "New Ranking system will change how many points will be awarded to distance from the stream (item 1). Old system was too vague on the point scale for each increment. New system is more defined ranking each distance with one set of points. Next item adjusted is the requirement for CNMP or NMP (Item 3a and 3b). This will not change for BMP's that require one for construction (barnyards, manure storages, etc.) however will change for BMP's that don't require one (spring developments, water control structure, grazing systems, etc.). All other items are the same as before" Brian seconds – motion passed

- Policy –
    - Brian motions to pass the Personnel Policy with the addition of a floating holiday. The use of the floating holiday will be determined annually by the board at the December board meeting for the following year Lillian seconds motion passed.
    - Brian motions that the 2016 floating holiday will be used on the 23rd of December of 2016 Lillian seconds - motion passed
- Personnel- NA
- QAB-
    - Jim Kessler motions to accept the following recommendations form the QAB for funding Brian seconds -motion passed
        - Silver Lake Township – Pop's Hobby Lake Road - $109,780.00
        - Forest Lake Township – Crowley Road – $154,011.00
        - Harford Township – Oliver Road – $51,100.00
        - Apolacon Township – Lake O' Meadows Road – $64,006.00
        - Auburn Township – Riley Road – $90,926.50
- Special Events – NA
- Budget and Finance-
    - Lillian motions to trade in the 2013 Ford Escape for a brand new Ford Escape from Simmons & Rockwell Jim Kessler seconds – motion passed
    - Jim G. or Curt Hepler will contact Simmons & Rockwell this month
- Education- NA
- Building committee –Jim G. met with John Puzzo as a potential designer. He gave us a bid price. The board will look at one more designer. In the January 2016 board meeting there will be a recommendation to select a designer.
- Strategic planning - NA
- RC&D – The open house at Tall Pines was not very well attended. Two people filled out forms. There was one very good candidate for the discount.

Old Business

Item # 1 Line of credit update

We can do the loan process we just cannot call it a revolving loan.

Item# 2 Pipeline projects update

Atlantic sunrise – we are still in the administrative completeness part
Constitution – just made a major modification b/ c they are outside their permit boundary
Triad- static for the moment
NE direct – not very far along in the process yet

Item# 3 solicitor search

Lillian motions to retain Mr. Littman as the District's solicitor Brian seconds - motion passed
Dan will contact Mr. Littman

Jim Kessler motions to cost share $1,000.00 for Salt Springs education grant DEP brain seconds motion passed (Lillian abstained)

New Business

Item #1 2016 operating budget

Lillian motions to approve the budget with the addition of the vehicle purchase Brian seconds motion passed

Item #2 Lease with County for Office space

Brain motions to accept the County lease agreement to rent 88 Chenango St at $1,250.00 per month for the next 2 years Jim K seconds – motion passed

Item#3 CDFAP

Brian motions to approve the 2015-2016 Conservation District UGWF Allocation worksheets with the Special Project funds of $48,662.06 to be used for the Building Fund Lillian seconds- motion passed

Item #4 -other
Dan motions to upgrade our internet to a connection that can handle our equipment with Time Warner Cable and not replace the sonic wall Lillian seconds - motion passed

Public Comment: no comments from the public

Brian motions to adjourn at 11:07 AM Dan seconds - motion passed

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: January 11, 2016

TO: Members,
State Conservation Commission

THROUGH: Karl G. Brown, Executive Secretary
State Conservation Commission

FROM: Johan E. Berger, Conservation Program Specialist
Financial Administration, Policy, Certification & Conservation District Programs

RE: Susquehanna County Conservation District Reserve Account
Additional Funds Request

Action Requested:

Approval of Susquehanna County Conservation District's request to designate FY2015-16 Unconventional Gas Well funds, in the amount of $48,662.00, into an existing reserve account.

Background:

At its March 17, 2015 public meeting, the State Conservation Commission approved the creation of a reserve account, under the Conservation District Fund Allocation Program Statement of Policy, for use of Unconventional Gas Well (UGW) funds allocated to the Susquehanna County Conservation District (SCCD). The approved request placed $108,254 of UGW funds in a reserve account for a new office building project.

The SCCD Board of Director's took action during its October 2014 board meeting to beginning planning for a future office building purchase or construction. That decision was driven by two factors: 1) limited office space for current and possible expansion of staff, and 2) the current lease agreement would be expiring at the end of 2015. The conservation district recently purchased a four-acre tract of land in December 2015, approximately one mile from its current office location in Montrose, PA. The district is currently entering into the design and cost estimate phase for the construction of the new building. The District anticipates moving into the new building in 2017.

Attached is a request (Attachment 1) to designate $48,662.00 in allocated FY2015-16 UGW funds into the district's existing Building Reserve Account established for the building project. The SCCD Board of Director's took action to designate these funds at its December 17, 2015 public meeting (Attachment 2).

Staff recommends that the Commission approve the request for additional funds to be designated to the SCCD Building Reserve Account in the amount of $48,662 for the building project.

Agenda item C.1.a

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: December 30, 2015

TO: State Conservation Commission Members

FROM: Frank X. Schneider, Director
Nutrient and Odor Management Programs

THROUGH: Karl G. Brown
Executive Secretary

RE: Act-38 Nutrient and Manure Management Program Evaluations

In June 2013, the SCC was briefed that the Nutrient and Odor Management Program staff were starting to perform combined Nutrient and Manure Management Program Evaluations with delegated Conservation Districts during the current 5 year delegation agreement time frame. You will likely recall that manure management activities under Chapter 91 regulations have now been included in the Act 38 delegation agreements.

During these evaluations, SCC and DEP staffs are reviewing the performance of conservation districts under the new agreements. The intent is to evaluate all conservation districts in a 4-year timeframe with an overall goal of improving and enhancing program delivery.

The specific purpose of these evaluations is to verify that the districts are meeting the obligations contained in their delegation agreements. In addition, the evaluation provides the conservation districts with the opportunity to comment on the program requirements, SCC and DEP policies and procedures, SCC and DEP training, administrative and technical support, and the district's working relationship with the SCC and DEP Regional Office and other related agencies or partners. It also allows SCC and DEP staff to make recommendations and suggestions aimed at assisting the conservation district in enhancing and/or improving its administration of the program.

Between July 1, 2015 and December 30, 2015, a total of seven (7) conservation districts were evaluated. Each district evaluated was meeting program requirements and had an overall ranking of "good".

Below are highlights of SCC/DEP recommendations (number of times).

1. SCC recommends that CD seeks out any animal operation that are thought to be Concentrated Animal Operation (CAOs) and regulated under Act 38, which have not

stepped forward and complied with the development and implementation of an approved Act 38 NMP. (3 of 7)

2. SCC recommends that the CD office contact DEP periodically to verify the current list of Act 38 NMP holders is accurate and correct. The CD should provide DEP with any and all corrections to the DEP list, as needed, and submit the appropriate information with quarterly reports. The DEP list of approved Act 38 NMPs and the CD office files should be consistent with operation names and dates of approval.(5 of 7)
3. SCC recommends that the CD office document all contacts with all Act 38 NMP holders concerning their plan implementation efforts and that information be kept in the Act 38 file. SCC recommends the use of a Con-6 type document to record these contacts. (7 of 7)
4. The SCC reminds the CD office that all CAOs and CAFOs have status reviews annually and that 1/3 of the VAO operations are to have on-site status review annually. (5 of 7).
5. SCC recommends the CD follow program guidance concerning the length of review of NMPs and if plans are thought to exceed the 90 day review time period that the CD should contact SCC regional coordinator for concurrence. (4 of 7)
6. SCC recommends that the CD review the administrative manual and develop a written technical assistance policy which is consistent with the administrative manual. (4 of 7)
7. SCC recommends that the CD follow the provided Act 38 Compliance Strategy for all operations including CAOs, CAFOs and VAOs. (2 of 7)
8. SCC recommends that the CD staff review the administrative and technical manual when issues arise and if they are unsure of procedure or protocol to contact their SCC Regional staff for guidance. (2 of 7)
9. SCC/DEP suggested that the CD staff complete an inspection report with all investigations of complaints. CDs should follow up with a formal letter to the farm operator after the inspection to formally inform the operator of their compliance efforts and any corrective actions needed. If corrective actions are needed the formal letter should also indicate a time period for when these actions shall be taken. A follow up inspection should follow to verify actions were taken and then a final formal letter indicating compliance has been gained. SCC/DEP suggests the use of the compliance formal letters when corrective actions are needed and the CD should follow the compliance strategy when this occurs. (3 of 7)
10. SCC/DEP would like to remind the CD staff that all CD correspondence concerning CAFO or those operations identified by DEP as being out of compliance and required to hold an Act 38 NMP, that the CD should mail a copy of all correspondence to DEP Regional office for their information. That would include copies of Administrative Completeness review letters, NMP approval or disapproval letters, on-site status review inspection reports, compliance formal documents (strike letters), complainant inspection reports and any other formal letter or report developed for these operations. (3 of 7)
11. SCC/DEP suggests that the CD consider directing some outreach efforts to the equine operators. (2 of 7)
12. SCC suggests that the CD perform on-site farm visits or at least map verifications of NBSs when they are part of a submitted Act 38 NMPs. (1 of 7)

13. SCC suggested that the CD consider developing reciprocal agreements with neighboring CDs. (1 of 7)
14. The SCC would encourage the CD to seek ways to sponsor or participate in additional informal and / or educational programs. (1 of 7)
15. With only 50% compliance observed during on-site NM Status Reviews, the SCC encourages the CD to perform more follow-up visits with their NMP operations who struggle with maintaining compliance.(1 of 7)
16. If manure storage setback waivers are requested in the future, the conservation district should follow the guidance provided in the Administrative Manual. (1 of 7)
17. SCC reminds the CD that districts are to administer the Level 2 Commercial Manure Hauler Test when requested. (1 of 7)
18. Conservation district should be using the "PA Agricultural Investigation Form" for investigating Chapter 91 complaints. This form can be found in the Administrative Manual. (1 of 7)

Below are highlights of conservation district comments (number of times)

1. CD suggest that SCC/DEP hold annual administrative and technical conferences concerning the Act 38/Chapter 91 programs and to be located in centralized locations across PA and not in Harrisburg or Lancaster. The conference could include information on program and policies changes, as well as, refresher trainings and administrative trainings at these conferences for all staff. (3 of 7)
2. CD suggests that SCC/DEP develop an electronic quarterly reporting system for CD office to submit the appropriate quarterly and contract documents. (2 of 7)
3. CD suggests that SCC allow the entire NMPs to be submitted by email. (1 of 7)
4. CD suggests that SCC/DEP do a better job organizing the formal compliance letters for CD use. It is hard to determine which formal letter is to be utilized with just numbers and letter and the CD suggest a naming system for each letter. (1 of 7)
5. CD suggests that DEP consider being consistent with compliance farmers. Farmers should not be allowed to be out of compliance for extended time periods. (1 of 7)
6. CD suggests the PDIP and Grant funding program be reinstated under Act 38. The CD indicated that these programs assisted numerous farmers in their county with participation with the Act 38 program. (2 of 7)
7. CD recommends that SCC/DEP develop a checklist of all obligated & required duties under the delegation agreement and share that list with CDs. (1 of 7)
8. CD suggested that SCC/DEP provide CDs with user friendly GIS software for the Act 38/Chapter 91 programs to tract Act 38 operations and manure imported and exported from each county. (1 of 7)
9. CD indicated that horse operations do not believe they are agricultural operations, thus the do not need to comply with state requirements. DEP/SCC should develop some type of news release for CD office to release to the local newspapers and horse owner magazines to inform them of their requirements (educational outreach document). (1 of 7)
10. CD suggests that MMPs should include manure generation calculations so farm operations can determine the volume of manure they handle from each animal type on the operation. (1 of 7)
11. CD suggests that the evaluation form should be cleaned up and SCC/DEP should eliminate the repetitive questions. Also, to make actual questions on the form, so CD staff can understand what is actually being asked for in the evaluation.(1 of 7)

12. CD suggests that SCC reduce the complexity of NMPs and indicated they are too complicated for farmers to understand.(1 of 7)
13. CD suggests re-arranging the NMPs so the important information for the farmer is up front.(1 of 7)
14. CD suggests that SCC/PDA make plan writers more accountable for their services and actions. Plan writers are not developing and submitting plans in a timely fashion to meet their operator's requirements.(1 of 7)
15. CD suggests that SCC eliminate P-Banking from the program, including NBSs. CD cannot monitor all these farms that are utilizing this method. (1 of 7)
16. CD suggests that DEP/SCC develop press releases for CD offices to put out in the local newspapers. (1 of 7)
17. CD suggests SCC/DEP or other agencies develop cost-share funding for farmers outside the Chesapeake Bay watershed. (1 of 7)
18. CD staff believe they are receiving adequate training to perform their duties, they do feel they would benefit from having more PA One-Stop Ag E&S Training, as well as more RUSLE Training. (1 of 7)
19. CD feels the current (DEP) Barn Sheets, as well as pamphlets help explain the regulations. However, they also see the need for more tools geared to help with outreach to equine operations.(1 of 7)
20. CD indicated that SCC needs to develop some type of news release or document that clearly demonstrates to animal operators the benefits for them to hold an Act 38 NMP. (1 of 7)
21. CD indicated they would like to see training in the following areas – excel spreadsheet, administrative training of the Act 38/Chapter 91 programs and Time management. (1 of 7).
22. CD staff indicated that the length of time to advertise CAFO NMPs has almost eliminated these plans being acted on in the first 90 day review time frame. SCC/DEP should consider some type of method to perform this task in a more refined timeframe, so CAFO NMPs can be acted on within the first 90 day timeframe.(1 of 7)
23. CD indicated that status review forms and other inspection forms become multiple copies, so copies can be given to the operators at the time of the inspection, similar to DEP's 102 forms. (1 of 7)
24. CD suggests that more training be offered on Ag BMPs and plan writing and review refreshers. (1 of 7)
25. CD would like to see more in depth training on plan writing using the actual NMP Spreadsheet as this experience would also assist with the NMP review process by making reviewers more familiar with the spreadsheet. (1 of 7)
26. How would a county get increased to a half grant? (1 of 7)
27. Better organization of the NM website. Information is there but hard to find. (1 of 7)
28. More regional training opportunities please. (1 of 7)
29. More education to township supervisors on Ag laws (PSAT presentation?) (1 of 7)

January 22, 2016

Nutrient Management, Manure Management, and Odor Management

Accomplishments, Challenges, Opportunities

Nutrient Management Program - Pennsylvania's first Nutrient Management Law, Act 6 of 1993, was among the first in the nation to establish specific nutrient management planning requirements through law and regulation.

In 2005, based largely upon research and community concerns with regard to manure odors and manure application setbacks from bodies of water, the legislature amended the original nutrient management law by enacting Act 38 of 2005. The regulations developed to implement the amended law placed a greater emphasis on phosphorus management in addition to the existing nitrogen management practices outlined in the nutrient management plans. The Act 38 nutrient management regulation also establishes year-round setbacks for manure applications with respect to certain bodies of water; specifically, perennial and intermittent streams, lakes, ponds and existing open sinkholes for regulated entities.

The Commission implements this program locally through county conservation districts providing farmers with technical assistance to develop and implement nutrient management plans. The program actively involves cooperating agencies (NRCS, DEP, PDA, and PSU) in the planning and implementation of this program. The program has also worked diligently to actively involve and engage private sector nutrient management planners to develop the majority of nutrient management plans for Pennsylvania farmers.

Nutrient Management Key Facts and Figures for Calendar Year 2014:

- 1,930 farms have NMPs approved for their operations.
- Net total of 475,117 acres under plan
  - CAOs = 937 for 106,178 acres
  - VAOs = 993 for 368,939 acres
- 5th version of NMP template, which was released in December 2015; 3rd version of NBS template; 2nd version of the P-Index; 9th version of the Technical Manual; 3rd version of the Administrative Manual

The FY 2015-16 state appropriation to the NM Fund to administer this program is $2.714 million.

2016 Nutrient Management Priorities, Challenges, Opportunities:

- Reconvene the NM Delegation Workgroup to review and revise the NM/MM delegation agreement for FY 17-22
- Continue to Update/Revise NM Administrative and Technical Manual, as needed
- Continue to provide service to delegated and non-delegated counties
- Continue to assist and provide expertise in NM/MM, and agriculture in general, to our partners at DEP and NRCS
- Work with non-delegated counties to try to have them accept delegation.
- Maintain program funding
- Provide expertise in NM/MM, and agriculture in general, to assist DEP with CBP obligations
- Continue to assist DEP with EPAs review of agricultural regulations/rules/policies, etc.

Manure Management Manual (MMM) Support - The land application of manure supplement that is called for in Chapter 91 of DEPs regulation was revised in 2011. All farms that utilize or generate manure, regardless of size, must have a Manure Management Plan, at a minimum.

The SCC has assisted DEP in the development, training, and outreach of the newly revised MMM Land Application Supplement. In 2012, DEP joined the SCC in adding Chapter 91 (MMM) delegated duties into the existing Nutrient Management Delegation Agreement that participating conservation districts operate under. DEP provides additional funds to support these additional delegated activities.

January 22, 2016

Nutrient Management, Manure Management, and Odor Management

Accomplishments, Challenges, Opportunities

Manure Management Key Facts and Figures for Calendar Year 2014:

- 1,767 outreach events
- 12,101 outreach contacts
- 188 consultant contacts
- 229 complaints processed
- 97 instances of compliance needed
- 31 compliance issues referred to DEP

Odor Management Program - Act 38 of 2005 placed the responsibility on the SCC to establish standards for developing and implementing effective odor management plans (OMPs). This law requires the implementation of an approved OMP for all new Concentrated Animal Operations (CAO) and Concentrated Animal Feeding Operations (CAFO) that build new or expand existing structures that house animals or store manure.

The Pennsylvania Odor Site Index (OSI), developed by the SCC in cooperation with Penn State University, is the method for evaluating the potential for impacts from the offsite migration of odors from proposed facilities.

All OMP developed under this program are reviewed on site by Commission staff, and the Commission is the legal entity that approves or disapproves all of the plans submitted under this program. Once a plan is approved, the Commission is required by regulation to inspect the operation annually to ensure proper implementation of the plan

Odor Management Key Facts and Figures for Calendar Year 2015:

- 458 OMPs have been **submitted**
- 410 OMPs have been **approved**
- 8 OMPs have been **denied**
- 13 OMPs have been **withdrawn** without action taken
- 19 OMPs were **rescinded**
- 8 OMPs are going through the **plan review process**.

	W	Central	NE	SE	Annual Totals
**2009	4	3	6	28	41
**2010	2	4	8	26	40
**2011	6	7	12	17	42
2012	10	2	17	18	47
**2013	5	6	14	44	69
**2014	7	8	18	44	77
2015	2	15	15	62	94
Totals	36	45	90	239	Grand Total: 410

Note that 2015 YTD is through December 31, 2015

**Note the change in approved plan numbers is due to rescinded OMPs

2016 Odor Management Priorities, Challenges, Opportunities:

- OM Public Relations / Marketing (How do we get the word out) as we are seeing to many “After the Fact” Plans
- Revising (Updating) OM database
- Increased OM workload - Plan submissions have dramatically increased in the last 3 years and the regulations require yearly inspection. One way to cut down on this was the Self-Certification Process we started last year

OMP Status Report

Action	OMP Name	County	Municipality	Species	AEUs	OSI Score	Status	Action By	Amend
CAO/ CAFO									
10/28/2015	Rutt, Joel H	Lancaster	Ralpho Twp	Broilers	170.14	11.9	Approved	Exec. Sec.	A
10/29/2015	Reiff, Landis	Union	W Buffalo Twp	Layers	201.85	79.2	Approved	Exec. Sec.	
10/29/2015	Heller, Daniel - Hilltop Farms	Lancaster	Elizabeth Twp	Broilers	154.06	87.0	Approved	Exec. Sec.	A
11/10/2015	Schlappich, Kimberly	Berks	Centre Twp	Duck	148.1	203.7	Approved	SCC	A
11/10/2015	S. & A. Kreider & Sons, Inc - Stoner Farm	Lancaster	E Drumore Twp	Cattle	80.0	37.1	Withdrawn/	Dymond	
11/18/2015	Beiler, Matthew	Lancaster	Paradise Twp	Broilers	0	41.4	Approved	Exec. Sec.	
11/18/2015	Zimmerman, Clifford	Dauphin	Conewago Twp	Broilers	0	27.8	Approved	Exec. Sec.	A
11/18/2015	Brubacker, Lamar	Snyder	Chapman Twp	Broilers	193.6	53.9	Approved	Exec. Sec.	
11/25/2015	Heisler's Egg Farm, Inc - Farm 1	Schuylkill	Walker Twp	Layers	1222.2	52.9	Approved	Exec. Sec.	A
12/8/2015	Weaver, Garrett	Lancaster	W Lampter Twp	Duck	131.57	57.2	Approved	Exec. Sec.	
12/8/2015	Boyd, Galen	Berks	Centre Twp	Broilers	268.52	29.6	Approved	Exec. Sec.	
12/16/2015	Boop, Dennis J, Sr & Jr - Boop Family Hog	Union	Limestone & Lewis Tw	Swine	1365.7	30.4	Approved	Exec. Sec.	
12/23/2015	Horning, Doug	Lebanon	Heidelburg Twp	Layers	0	11.7	Approved	Exec. Sec.	
12/24/2015	Miller, Donald	Union	Buffalo Twp	Layers	202.6	39.3	Approved	Exec. Sec.	
12/29/2015	Kurtz, Michael & Regina	Snyder	Spring Twp	Layers	152.0	49.5	Approved	Exec. Sec.	

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: January 5, 2016 **ITEM: C.1.c**

TO: Members
State Conservation Commissi--

FROM: Karl J. Dymond
State Conservation Commissi

SUBJECT: January 2016 Status Report o ent Plan Reviews

Detailed Report of Recent Odor Management Plan Actions

In accordance with Commission policy, attached is the Odor Management Plans (OMPs) actions report for your review. No formal action is needed on this report unless the Commission would choose to revise any of the plan actions shown on this list at this time. This recent plan actions report details the OMPs that have been acted on by the Commission and the Commission's Executive Secretary since the last program status report provided to the Commission at the November 2015 Commission meeting.

Program Statistics

Below are the overall program statistics relating to the Commission's Odor Management Program, representing the activities of the program from its inception in March of 2009, to December 31, 2015.

The table below summarizes approved plans grouped by the Nutrient Management Program Coordinator Areas and by calendar year.

	W	*Central*	*NE*	*SE*	*Annual Totals*
***2009*	*4*	*3*	*6*	*28*	*41*
***2010*	*2*	*4*	*8*	*26*	*40*
***2011*	*6*	*7*	*12*	*17*	*42*
2012	*10*	*2*	*17*	*18*	*47*
***2013*	*5*	*6*	*14*	*44*	*69*
***2014*	*7*	*8*	*18*	*44*	*77*
2015	*2*	*15*	*15*	*62*	*94*
Totals	*36*	*45*	*90*	*239*	*Grand Total:* *410*

**Note the change in approved plan numbers is due to rescinded OMPs

As of December 31, 2015, four hundred fifty eight OMPs have been **submitted**, four hundred ten have been **approved**, eight plans have been **denied**, thirteen plans have been **withdrawn** without action taken, nineteen plans were **rescinded** and eight plans are going through the **plan review process**. Note: of the 458 total plans, 76 of those plans are amendments of previously approved plans.

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570-836-2181 (FAX) 570-836-6266

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: January 11, 2016

TO: State Conservation Commission

FROM: Johan E. Berger
Financial, Certification and Conservation District Programs

SUBJ: 2015 Program Accomplishments; 2016 Priorities & Challenges
Nutrient and Odor Management Specialist; Commercial Manure Hauler & Broker Certification programs

Certification Program Summary

State Conservation Commission staff facilitate training and certification programs for persons interested in 'commercial' or 'public' certification in order to develop or review odor management or nutrient management plans under the Act 38 *Facility Odor Management or Nutrient Management* programs. Training is also facilitated for commercial manure haulers and brokers seeking certification under the Act 49 *Commercial Manure Hauler and Broker Certification* program.

Program Accomplishments (January 1, 2015 to December 31, 2015)

1. Conducted 35 days of training for 150 persons applying for certification under the Nutrient Management Specialist, Odor Management Specialist and Commercial Manure Hauler and Broker certification programs.
2. Completed 32 reviews of nutrient management plan reviews for certification requirements. *Note: This is an internal review conducted on NMPs under review by public review specialists seeking final certification.*
3. Issued the following licenses to individuals successfully completing certification and continuing education requirements: *Note: This includes license renewals.*
    a. Nutrient Management and Odor Management Specialists: 65
    b. Commercial Manure Haulers and Brokers: 180

    Note: Total licenses monitored and maintained by Commission staff on behalf of PDA:
    a. Nutrient Management Specialists - 275
    b. Manure Haulers and Brokers - 600
    c. *Odor Management Specialists- 3*4
4. Approved/sponsored continuing education programs and issued credits to eligible participants:
    a. Nutrient Management Specialist certification: ..... 55 events
    b. Commercial Manure Hauler and Broker certification: ..... 23 events

    Note: Several series of workshops held during the 2015 Manure Expo held July 15 – 16, 2015 provided an expansive array of continuing education programs for Nutrient Management Specialists and Commercial Manure Haulers and Brokers.

5. Conducted five (5) compliance inspections under the Commercial Manure Hauler and Broker Certification program. Compliance activities included the review of records maintained by hauler and brokers and nutrient balance sheets developed by brokers. Three investigations were resolved with no penalties. Two (2) investigations resulted in issued penalties.
6. Conducted eleven (11) compliance investigations under the Nutrient Management Specialist and Odor Management Specialist certification program. Investigations involved the evaluation of specialist's competency and authorized activities. Four investigations were resolved with no penalites. Seven (7) investigations remain open.

Key Program Priorities and Challenges for 2016

1. An increased number of requests for certification investigations regarding certified planner activities, across all certification programs. This increase is anticipated as conservation districts identify inconsistences in planner activities and feel more comfortable submitting investigation requests to program staff. And, as more 'spot-check' activities are performed by program staff .
2. Record keeping site inspections for commercial manure hauler and brokers will continue to increase resulting in an increased potential for active enforcement and penalty cases. The Act 49 program, by ratio of inspections to enforcements, is the greatest among the three certification programs managed on behalf of the Department.

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COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: January 11, 2016

TO: State Conservation Commission

FROM: Johan E. Berger
Financial, Certification and Conservation District Programs

SUBJ: 2015 Program Accomplishments; 2016 Priorities & Challenges
Resource Protection and Enhancement Program (REAP)

REAP Program Summary

The Resource Enhancement and Protection (REAP) Program allows farmers, businesses, and landowners to earn state tax credits in exchange for the implementation of conservation Best Management Practices (BMPs) on Pennsylvania farms. REAP is a "first-come, first-served" program – no rankings. The program is administered by the State Conservation Commission (Commission) and the tax credits are awarded by the Pennsylvania Department of Revenue (DOR). Eligible applicants receive between 50% and 75% of project costs in the form of State tax credits for up to $150,000 per agricultural operation.

Program Accomplishments

FY2007 to date:

1. Total of $69 million in REAP requests including 6,192 BMP projects
2. Total of $57 million in tax credits awarded for 4,147 completed BMP projects. (Note; approximately only $52.4 million have been awarded dues to various stages of processing (applicant non-compliance, pending DOR completion).
3. $19.6 million in other public funding utilized in implementation of REAP eligible BMPs.
4. Total sales of tax credits were approximately $18.5 million, representing about 35% of credits awarded since 2007.

January 1, 2015 to December 31, 2015

1. Tax Credits issued to applicants for completed, eligible projects FY14 and residual completed projects from prior program years..... *$4.208 million*
2. Number of BMPs completed associated with issued tax credits..... *260 projects*
3. Number of tax credit 'sales' completed .....*263 sale transactions*
   (Totaling $4.67 million)
4. Number of applications received (FY2014) 78
   a. Amount of tax credits allocated for eligible projects ..... *$2.44 million*
   b. Number of BMPs associated with tax credits for eligible projects 1*50*

5. Number of 2015-16 applications received to date *202*
    a. Amount of tax credits requests for eligible project: ..... *$6.43 million*
    b. Amount of tax credits allocated for eligible projects ..... *$6.36 million*
    c. *Amount of tax credits (pending) for completed eligible projects* FY2015 ..... $4.365
    d. Number of BMPs associated with tax credits for eligible projects *437*
6. Number of site inspections conducted on completed projects *31*
   (Includes roofed BMPs, equipment [no-till & low disturbance residual management] and waste storage structures.)
7. Over 697 'self-compliance letters for equipment BMPs were sent to applicants, approximately 95% of those letters have been received and processed.
8. Educational and promotional activities included nine (9) farmer meetings various visits to conservation districts and NRCS offices across Pennsylvania.

Program Development

Key program development included the revision of the FY2015-16 REAP Guidelines and Application to include

a. Revisions and clarifications the 'Low Residue Management Equipment' tax credit eligibility criteria.
b. 'Precision Ag Equipment components', as an eligible BMP, to upgrade equipment for the precision application of nutrient in manure or fertilizer. (*Provide REAP credits for the components of Nutrient Application Equipment that enable base equipment (new or existing) to be upgraded with precision/variable rate application capabilities.)*
c. Provide REAP tax credits for the establishment of 'Poultry/Livestock Housing Vegetative Buffers' to reduce ammonia and dust pollution from livestock (particularly poultry) housing.

Key Program Priorities and Challenges for 2016

1. Refine "precision ag equipment" criteria and guidelines.
2. Increase award efficiency and management of annual 'back door' tax credit loss (2007-2013 average loss ~ 23%)
3. Develop and promote 'riparian buffer' component of REAP
4. Promotion of Cover Crop BMP implementation
5. Expand marketing efforts and 'sponsorships' for REAP program
6. Continue REAP compliance inspections
7. Update the REAP database

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

Agenda Item: C.1.f

Date: January 11, 2016

To: State Conservation Commission

From: Roy Richardson, Dirt and Gravel Roads Program Coordinator

Through: Karl G. Brown, Executive Secretary

RE: 2015 Dirt, Gravel, and Low Volume Roads Program (DGLVRP) accomplishments

QAQC Visits - Staff has completed 23 Quality Assurance/Quality Control (QAQC) visits this year. Staff has focused on the counties that receive the larger allocations. While 23 visits represent approximately 1/3 of the participating counties, it represents over 50% of the Dirt and Gravel Allocation. Staff is on target for meeting the goal of visiting every county on a three year cycle.

Annual Workshop – The annual workshop was held in Cranberry Township, Butler County on September 29, 30. The workshop consisted of one day of classroom trainings and one day of field tours of actual projects completed in Butler, Mercer , and Lawrence Counties. Approximately 200 attended including Conservation Districts, SCC and Center staff, Bureau of Forestry staff, Township Supervisors, DEP, and PennDOT Staff.

Payments to Conservation Districts – Conservation Districts receive ½ of their DGLVR allocation in advance. As they incur actual expenses, Districts then submit a replenishment request to receive the remaining funds. The following table is a summary of the DGLVR funds sent to Conservation Districts:

Activity	DGR	LVR	Combined
Advance Payments(2014-2015)	$9,316,500	$3,724,000	$ 13,034,000
Reimbursements (2014-2015)	$6,326,000	$1,225,000	$ 7,551,000
Advance Payments(2015-2016)			$ 13,034,000
		Total	$ 41,183,000

*There is approximately $5,945,000 of 2014-2015 funds remaining in Harrisburg that can be dispersed to Conservation Districts as they submit reimbursement requests (DGR and LVR combined).

DGRoads GIS System Update - The new online GIS project tracking system "DGRoads" has been released. The system will be used by Conservation Districts to track and report deliverables, location, and financial data on both "Dirt and Gravel", and "Paved Low Volume" projects. Commission and Center staff has developed a training program for the conservation districts using the program. 5 training sessions have been scheduled through mid - December.

The timing of these trainings will coordinate well with the "Annual Summary Report" process that typically sees Conservation Districts updating their GIS databases by January 15 each year. The 2015 Annual Summary Report will be completed in the new online DGRoads system and include both "Dirt and Gravel", and for the first time, "Paved Low Volume" projects.

Other DGLVR Activities

Activity	Location	Attendance	Date	YTD
ESM	9 locations statewide Montgomery Armstrong Bedford Washington Luzerne Warren Lycoming Berks Mercer	 34 79 77 90 70 44 88 48 39		570
Other Trainings	• Administrative trainings (7) • Webinars (7) • "Help Desk" (2) • Conference calls (6)	Approx. 30-50 each		170 280
QAQC visits	23 counties			23
Tech assists	Conservation Districts (50+)			100+
Quarry Visits	Quarries statewide (43+)			70+
Workgroups	• Policy and Planning • Product and Process			4 1
Workgroups, cont.	• Education and Outreach Workgroup • SCC/Center Joint Staff Meeting			1 2
Other Activities	• GIS training – 5 trainings held across the state			98 including at least one person from each conservation district

Project Implementation – Conservation districts are just learning to report their accomplishments in the new GIS system. While many districts have not entered all of their data into the new GIS system, there is enough data entered to show that districts have completed a record number of Dirt and Gravel road projects, and Low volume road projects have also been completed. A report detailing conservation district's accomplishments will become a part of the Annual Summary Report. This will be available late winter/early spring.

2016 Goals and Objectives

Keep the train on the tracks – For the most part, everything is running well. Commission and Center staff work well together, districts are adjusting to the increased funding levels. Low volume road projects are being completed and we are learning from each completed project. Districts seem to be generally pleased with and enthusiastic about the program. The current model is to set general statewide guidelines for the program while allowing room for flexibility at the local level. The goal would be to continue to work with all the program participants without making any radical changes.

Administrative goals

QAQC – Commission staff is on target for the goal of visiting each county for a quality control, quality assurance audit once every three years.

Funding –Dirt and gravel, and low volume road allocations are both formula driven. These formulas are reviewed by the workgroups every year. The general consensus it to continue allocating funds using these formulas. Funding recommendations will be presented to the SCC at the May meeting.

District involvement – Conservation districts remain active and enthusiastic about the program. Districts are involved in policy making through various workgroups. In addition, any district staff person can stay informed through various regional meetings, webinars, round table meetings, conference calls, and webinars.

Start development of new 5 yr. agreement – Participating conservation districts enter into a 5 year agreement with the Commission. Funding recommendations for FY 2016-2017 will be presented to the Commission in May. This will be the 4th funding year of the 5 year agreement. The current agreement was developed by DEP and assigned to PDA. A new 5 year agreement will need to be developed by PDA legal staff. This process can take a lot of time. The best way to assure contracts are done in a timely manner is to start working on them well in advance.

Technical goals

Driving Surface Aggregate (DSA) – The program currently follows PennDOT construction specifications for DSA. Commission and Center staff and conservation district workgroup members believe that it would good for the program to adopt its own standards and

specifications. This would allow more flexibility in the program and it could make more DSA suppliers available to the program.

Full Depth Reclamation (FDR) – In general, FDR is the process of grinding up the first 6”-12”’ of the road. Sometimes additional materials or chemicals are added to the road. The road is then re-compacted. Due to the high cost of FDR projects, the program has only done a few of these projects, but with increased funding levels, interest in this is rising. Commission and center staff need to evaluate the FDR process to determine if and when it should be used. FDR may be a good tool for the low volume program, but it needs to be evaluated more closely for use in the dirt and gravel side.

Low Volume Roads – The program continues to evaluate low volume road projects. Districts are learning with each new project completed. Commission and center staff have been hosting numerous round tables, webinars, conference calls, and the like where conservation districts “showcase” their completed projects.

Urban projects – Urban projects can be more complicated and more expensive than rural projects. Some counties have completed projects in urban areas. Commission and center staff continue to evaluate these projects. Urban BMPs will eventually be incorporated into a low volume road module in the ESM training course. The challenge is to allow environmentally sensitive road maintenance in urban areas without becoming the storm water management program or the MS4 program funding source.

Education and Outreach goals

The Center for Dirt and Gravel Road Studies takes the lead on most of the education and outreach efforts. Conservation districts are constantly being polled for topics they want more training on. These are incorporated into our webinars. And education and outreach workgroup consisting mostly of district staff and field reps advise the Commission and center staff. A listing of some of the types of outreach efforts are as follows:

- Webinars
- Help desks
- Roundtable
- Environmentally Sensitive Maintenance Training
- Administrative training
- GIS
- Annual conference

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: January 11, 2016

TO: State Conservation Commission

FROM: Johan E. Berger
Financial, Certification and Conservation District Programs

SUBJ: 2015 Program Accomplishments; 2016 Priorities & Challenges
Conservation District Fund Allocation Program

Program Summary

Established under the Conservation District Law (Act 217 of 1945), the Conservation District Fund Allocation Program (CDFAP) provides for the distribution of funds earmarked for conservation districts from PDA and DEP state budget line items, as well as, Unconventional Gas Well funds under Act 13 of 2012. These funds support general conservation operations through administrative assistance and employment costs for staff, (i.e. conservation district management, administrative and technical assistance staff) and special projects.

Until 1999, funding was limited to an annual appropriation through DER/DEP with its highest level at $2,850,000. Since 1999, funding to the Conservation District Fund has increased significantly due to the inclusion of an additional appropriation to the PDA for conservation districts, with the highest cumulative total reaching $5,400,000. Recently, with the inclusion of funding from the Unconventional Gas Well Fund, the Conservation District Fund annual total appropriation has reached its highest level of $10,875,000.

Increased funding has allowed conservation districts to expand and improve programs and expand staff resources, to over 500 positions statewide, to support the mission and objectives of conservation district activities in their rural and urban communities.

Program Accomplishments (January 1, 2015 to December 31, 2015)

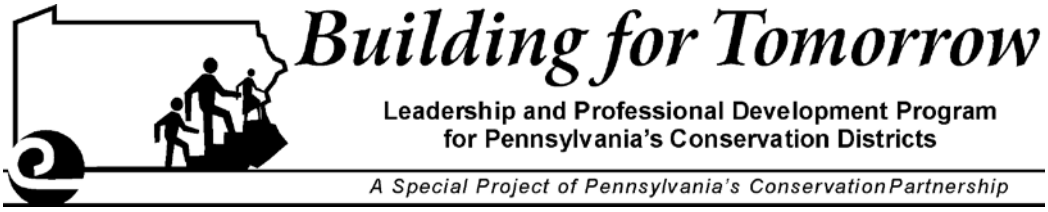
1) Implemented revised provisions of the Conservation District Fund Allocation Program Statement of Policy (SOP), distributing over $7.125 million in 'line item' and Act 13 funds to conservation districts. The revised SOP provisions:
    a. Provide greater flexibility to conservation districts in the designation of portions of allocated CDFAP program funds for any SOP program element.
    b. Allow the placement of portions of CDFAP program funds in dedicated "reserve accounts" for specific defined purposes approved by the Commission.
    c. Allow for the cost share of technicians up to 100% where CDFAP funds have been made available to the conservation district.

2) Contracted with a "part-time" Leadership Development Program coordinator who organized and facilitated several program initiatives under the direction of the Leadership Development Program Committee, including:
    a. Planning sessions with the Committee and sub-work groups to develop future program initiatives. *Future priority program initiatives are described in Attachment 1.*
    b. A "listening session" for District Directors and staff to gather director and employee professional development needs.
    c. Strategic Planning grants for four (4) conservation districts, and
    d. Annual Staff Conference and District Management Summit. Over 170 persons from conservation districts participated.
3) Provided funding resources for the continued facilitation of the:
    a. Ombudsman Program: maintaining two (2) positions in Blair and Lancaster counties. The program provided specific services, training, and educational services and materials to the Districts, to assure that all parties (local governments, the general public and the agricultural community) involved in complex and controversial projects, are treated in a fair and equitable manner.
    b. Annual Agricultural Conservation Training (Ag Boot Camp): Two (2), week-long conservation training sessions for conservation district agricultural technicians and engineers, and USDA NRCS staff. Thirty (30) individuals participated in the 'basic/introductory' level training and 19 individuals participated in the advanced level, which includes an Agronomy and Engineering track. Overall, staff from 35 conservation districts participated.

Key Program Priorities and Challenges for 2016

1. Maintaining adequate funding resources for long-term support of all CDFAP program elements (conservation district funding, Leadership Development Program, Ombudsman Program and Ag Conservation Training)
2. Maintain a comprehensive and meaningful professional leadership development program for conservation districts directors and staff.
3. Secure services of a Full-time Leadership Development Coordinator to assure an efficient coordination of resources and programs for the Leadership Development Program.
4. Develop an updated training program and delivery system for district directors and management staff reflecting the complexity and scope of responsibilities and programming at the district level and addressing the needs of the "modern" conservation district director and district manager.

Attachment 1



Challenges and Needs for Leadership and Professional Development of Conservation District Boards and Staff

(Developed by the Leadership Development Committee – May 5/6, 2015)

The Leadership Development Committee identified the following priority challenges that need to be considered in planning and implementing leadership and professional development programs for conservation districts for the next 3 years.

- ***District Board Member Nominating Process*** – Recruiting and securing quality board members through direct contact and education of all elements involved in the process including nominating organizations, potential candidates and County Commissioners
- ***Education of County Commissioners*** – 'Who' is your Conservation District and 'What' is their role, legal responsibilities and board appointment requirements.
- ***County Level Program and Information Delivery*** – Local level delivery is the most effective delivery of information and programing in order to reach the greatest number of district board and staff.
- ***Consistent Priority Funding for Leadership Development*** – To support a long term strategy for an effective leadership development program and delivery, a dependable source of funding needs to be secured.
- ****Statewide Program Facilitation*** – To provide consistent, and effective program development and delivery it is essential to have a position/individual that is responsible for the oversight of the program elements.
- ****Director Orientation / Training*** – To assure that District Boards are knowledgeable and provided the training and tools needed to make the important decisions required of public officials, there needs to be a consistent and effective orientation and training program across the state.
- ****Manager Training*** – With the increase in programs, funding, staff, and responsibilities of the Districts, it is essential that managers receive the training and support needed.
- ****Board Chair Training*** – A series of ongoing regional trainings are needed to provide the tools and skills needed for Board Chairs to effectively lead the District Board meetings to meet the growing needs and sophistication of their decision making process.
- ****Treasurer / Fiscal Officer Training*** – With the increase in funding levels, complexity of accounting demands and assurance of adequate fiscal management policy and oversight, specialized training for both positions are needed.

- ***Partner Coordination of Program Delivery*** – As the local focus of coordination and delivery of conservation programs, the conservation districts need to be supported by the Conservation Partners in training and development. The potential exists for cross training opportunities offered by each of the partners that would enhance and strengthen the relationships and capabilities of the partnership as a whole.
- ****Identification and Institutionalization of Core Training Components*** – The Leadership Development effort has identified and produced numerous quality programs and support materials. With director, manager, staff and county government turnover, it is essential that core training components be identified, organized and delivered in a consistent and reliable manner.
- ****Director Job Description / Handbook Reference*** – Both the director job description and handbook need to be revised to reflect the modern responsibilities and needs of board member. A consistent delivery system and updated support materials needs to be developed and made available to district boards.
- ***Financial Resource for Consultation*** – A resource knowledgeable of conservation district financial management and responsibilities needs to be identified and secured as a source of consultation for districts.
- ***Crisis or Problem Management*** – A flexible and responsive resource needs to be available for responding to operational crisis that may arise for any single district.
- ****Management Boot Camp*** – A "jump start" training program is needed for new district managers.
- ***Succession Planning*** – Changes in both boards and managers need to be facilitated through a well-developed succession plan. The tools and methodologies need to be developed and delivered to districts.
- ****Staff Conference*** – Training in leadership development, professional development, team skills and community interaction, along with other essential knowledge and skills needs to be provided to assure a well-developed and functional district team
- ***Recognition of Local Opportunities*** – Districts need to look to their communities that they serve when identifying needs and programming opportunities. The methodology, tools and skills need to be refined and shared for local district utilization.
- ***Strategic Planning*** – Resources to continue encouragement and support of district strategic planning is essential

**** indicates top priorities***